CASE CLOSURE SUMMARY REPORT
Tesoro Station 67090
Former Beacon Station No. 685
9301 Greenback Lane
Orangevale, California
Sacramento County Site No. B363

August 2003
AZ142-017

Prepared for:
Tesoro Refining and Marketing Company
3450 S. 344th Way #100
Auburn, WA 98001

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August 12, 2003

Susan Erikson, M.S.
County of Sacramento -
Environmental Management Department
8475 Jackson Road, Suite 230
Sacramento, California 95826-3904

RE: Case Closure Summary Report
Tesoro Site #67090 (former Beacon #685), LRP Site No. B363
9301 Greenback Lane, Orangevale, California

Dear Ms. Erikson:

Enclosed is a copy of the report entitled Case Closure Summary Report ("Closure Report") for the former Beacon Station No. 685 at 9301 Greenback Lane in Orangevale, California, submitted on behalf of Tesoro Refining and Marketing Company ("Tesoro"). This Closure Report provides a comprehensive summary and evaluation of the remedial activities, soil and groundwater investigations and monitoring data collected at the Site, including rationale for recommending case closure. This report is submitted in accordance with the Sacramento County Environmental Management Department (SCEMD) guidelines on Minimum Requirements for Closure Requests, pursuant to the SCEMD's letter to Ultramar, Inc. dated February 11, 2002.

Please feel free to call me at 415/460-1561 if you have any questions.

Sincerely,

Jeff Hennier, R.G., C.HG.
Principal Hydrogeologist

cc: Catherine Runden, Tesoro
Chuck Miller, USA Petroleum
Brian Kelleher, Kelleher and Associates

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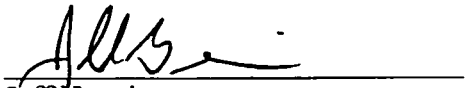
SIGNATURE PAGE

All hydrogeologic and geologic information, conclusions, and recommendations contained in this report have been prepared by a California Certified Hydrogeologist.



Jeff Hennier
Principal Hydrogeologist
California Registered Geologist (4605)
California Certified Hydrogeologist (105)

8/12/03
Date

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CASE CLOSURE SUMMARY REPORT
Tesoro Station 67090
Former Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

1.0 INTRODUCTION

This Case Closure Summary Report ("Closure Report") is submitted on behalf of Tesoro Refining and Marketing Company ("Tesoro") for the Tesoro Station 67090 (former Beacon Station No. 685) at 9301 Greenback Lane in Orangevale, California ("the Site"; Figures 1 and 2). Pursuant to Sacramento County Environmental Management Department (SCEMD) guidelines, this Closure Report provides a general Site Conceptual Model developed from a comprehensive summary and evaluation of the remedial activities, soil and groundwater investigations and monitoring data collected at the Site, including a rationale for recommending case closure. This report is submitted in accordance with the SCEMD guidelines on Minimum Requirements for Closure Requests, pursuant to the SCEMD's letter to Ultramar, Inc. dated February 11, 2002.

2.0 BACKGROUND AND SITE HISTORY

2.1 Site Description

The Site is located at 9301 Greenback Lane on the northeast corner of the intersection of Greenback Lane and Walnut Avenue in Orangevale, California (Figures 1 and 2). The Site is a currently operating retail gasoline station covered by asphalt pavement with a cashier office/convenience market, three gasoline underground storage tanks (USTs) in a single tank basin, gasoline dispenser islands, and a canopy (Figure 2). The Site vicinity consists of retail stores and residential neighborhoods.

The Site is located in the southeast portion of the Sacramento Valley hydrographic subregion of the Central Valley of California. The Site is situated at an elevation approximately 270 feet above mean sea level in the American River drainage basin approximately 4,000 feet west of Lake Natoma and 3.3 miles southwest of Folsom Dam (Figure 1).

2.2 Site History

A retail gasoline station was reportedly operated as a Regal gasoline station by Wickland Oil Company until July 1988 (Delta, 1995), when it was purchased by Ultramar, Inc., and subsequently operated as a Beacon gasoline station. Tesoro purchased the Site from Ultramar, Inc. in May 2002. Tesoro has retained certain environmental liabilities at the Site and is responsible for management of the fuel leak issues associated with the Site service station. Stickler Vance Partnership is the current property owner of record and has been informed of the closure request presented in this Closure Report (Appendix A).

2.3 UST Removals

A 250-gallon capacity waste oil UST and three gasoline USTs (one 4,000-gallon and two 10,000-gallon capacity), associated piping and dispensers were removed from the Site in May and June 1990 (Delta, 1990). The USTs were removed by Fillner Construction, Inc. under the oversight of Delta Environmental (Delta, 1990). The USTs were transported to H&H Ship Service Company in San Francisco for metal salvaging (Delta, 1990). Approximately 650 cubic yards of soil were removed to a depth of approximately 14 feet during the UST excavation activities (Delta, 1995).

Six soil samples were collected from the gasoline UST excavation and two samples were collected from the waste oil UST excavation; six soil samples were collected from beneath the fuel dispenser pipeline, one sample for every 20 lineal feet of piping (Delta, 1990). Results of the excavation pit and piping trench soil sample analyses are summarized in Appendix B. Results of excavation soil sampling at a depth of 14 feet bgs indicated petroleum hydrocarbons were detected, including total petroleum hydrocarbons as gasoline (TPHg) up to 17,000 mg/kg, benzene up to 930 mg/kg, toluene up to 1,200 mg/kg, ethylbenzene up to 260 mg/kg, and total xylenes up to 1,200 mg/kg. With the exception of total xylenes (1.3 mg/kg) and TPHg (19 mg/kg) detected in one piping trench sample (PT-6), petroleum hydrocarbons were not detected in soil samples from the piping trench and waste oil UST excavations (Appendix B). Additional compounds analyzed from the waste oil UST excavation soil samples were also not detected (Appendix B). Additional description of the UST removals and soil excavation remedial actions are included in Section 5.1

3.0 EXTENT OF IMPACTED SOIL AND GROUNDWATER

3.1 Results of Soil Investigations

Soil samples were collected at the Site between May 1988 and 1991 to characterize the lateral and vertical extent of impacts associated with release(s) of petroleum hydrocarbons from the USTs (Delta, 1992). Subsequent confirmation soil sampling was conducted in January 1992 to assess the effectiveness of a soil vapor extraction and treatment system (SVETS) that was operated at the Site between February 1991 and April 1992 (Delta, 1992). Results of soil investigations and confirmation sampling are summarized in Appendix C.

Results from soil sampling and well drilling activities on and adjacent to the Site indicate that Site soils consist predominantly of relatively coarse-grained sediments including silty sands, sands, gravelly sands, and sandy silts (Delta, 1995). Soils immediately beneath the former UST basins consist primarily of sands and gravelly sands (Delta, 1995). Lithologic data collected from prior investigations is presented on cross sections included in Appendix D.

Soil samples collected by Delta between May 1988 and 1991 prior to operation of the SVETS revealed elevated concentrations of petroleum hydrocarbons within approximately 30 feet of the former UST locations at depths between 25.5 feet bgs (SB-1) and 45 feet bgs (VEW-2) (Appendix D). Cross sections included in Appendix D indicate the estimated lateral and vertical extent of petroleum hydrocarbons in soil prior to operation of the SVETS (Delta, 1995). Sampling conducted during the UST removals indicated the highest petroleum hydrocarbon

concentrations in soil were encountered at depths of 14 feet bgs beneath the ends of the USTs (Appendix B).

In January 1992, approximately eleven months after startup of the SVETS, four soil confirmation borings (SCB-1 through SCB-4) were drilled and soil samples collected to depths between 35- and 38-feet bgs (Delta, 1992). The confirmation borings were located to assess residual concentrations in soil where elevated concentrations of petroleum hydrocarbons had been detected prior to soil remediation (Delta, 1992). Borings were drilled on the north ends of the former 10,000-gallon unleaded UST and the former 10,000-gallon regular UST locations (borings SCB-1 and SCB-2) and on the north and south end of the former 4,000-gallon premium UST location (borings SCB-3 and SCB-4). Soil samples were logged and screened with a photoionization detector (PID) on a continuous basis. Samples were collected at depths ranging from 20 to 38 feet bgs.

With the exception of low levels of benzene (0.006 mg/kg), ethylbenzene (0.010 mg/kg) and total xylenes (up to 0.034 mg/kg) detected in soil samples collected from SCB-4 at depths of 20- and 38-feet bgs, no other petroleum hydrocarbons constituents were detected in soil samples collected from the four soil confirmation borings (Figure 3). Boring SCB-4 was located near the area where the highest concentrations of petroleum constituents had been previously detected (930 mg/kg benzene and 17,000 mg/kg TPHg) when the USTs were removed in 1990. Based on results from confirmation sampling results, Delta estimated approximately 0.02 gallons of gasoline remained in the soil matrix (Delta, 1995). Based on these results and an assessment of target cleanup levels using Designated Level Methodology for Waste Classification and Cleanup Level Determination (Marshack, 1986), Delta recommended shutdown of the SVETS (Delta, 1992).

3.2 Results of Groundwater Investigations and Monitoring Activities

Between July 1989 and May 1990, eight shallow groundwater monitoring wells (MW-1 through MW-8) were drilled on, and hydraulically downgradient and crossgradient from the Site to assess the lateral and downgradient extent of petroleum hydrocarbon compounds in groundwater Figure 2). In 1997 grab groundwater samples were collected from two borings (HP-1 and HP-2), and in April 1999 two additional monitoring wells (MW-9 and MW-10) were installed off-site and hydraulically downgradient and crossgradient of the Site (Figure 2). Groundwater monitoring was conducted at the Site between July 1989 and January 2003. Well construction details are presented in Table 1. Tabulated historical data of groundwater level measurements and sample analyses are presented in Appendices E and F, respectively. Descriptions of these data are presented below.

3.2.1 Groundwater Levels and Flow Direction

Water-level measurements were collected from Site monitoring wells on a periodic basis between July 1989 and January 2003. Groundwater elevations collected from the monitoring wells were used to construct maps presenting the shallow water level contours in the shallow water-yielding zone. A historical summary of water level measurements and elevations is provided in Appendix E; most recent groundwater elevations collected from Site monitoring wells on January 21, 2003 were used to construct a water table elevation contour map presented

in Appendix E (RDM, 2003). Selected historical water table elevation contour maps from previous quarterly monitoring reports submitted for the Site are also included in Appendix E.

Historical monitoring data indicate the depth to groundwater measured in well MW-1 varied between a high of 40.56-feet bgs (June 1994) and low of 50.71-feet bgs (January 2003) (Appendix E). These data indicate the groundwater level at well MW-1 fluctuated approximately 10.1 feet during the intervening period. Most recent water-level data from January 2003 and historical water-level data indicate the general direction of groundwater flow was toward the southwest (Appendix E). Prior to startup of the groundwater extraction and treatment system (GWETS), groundwater measurements indicated a flow direction to the southwest under an approximate gradient of 0.004 feet/foot (RTD, 1995). During operation of the GWETS between February 1991 and 1994, groundwater levels were influenced locally by groundwater extraction from wells MW-2 and MW-3 (Delta, 1995).

3.2.2 Groundwater Sampling Results

Groundwater samples were collected for analyses from Site monitoring wells during the period between July 1989 and January 2003. Three of the first eight shallow groundwater-monitoring wells, MW-1 through MW-3, were completed on Site in 1989 (Delta, 1995). Five additional shallow groundwater-monitoring wells, MW-4 through MW-8, were installed in 1990 and located hydraulically down- and crossgradient of the Site to characterize and monitor the extent of petroleum-impacted groundwater (Figure 4). Finally, two monitoring wells, MW-9 and MW-10, were installed off-site across Walnut Avenue to further assess the downgradient extent of petroleum hydrocarbons in groundwater. The monitoring wells were installed to depths between approximately 55- and 60-feet bgs (Table 1). Wells MW-2 and MW-3 were operated as groundwater extraction wells during the period between February 1991 and 1994.

Groundwater samples collected at the Site were analyzed for TPHg and BTEX compounds. Additionally, the samples were analyzed for methyl tertiary-butyl ether (MTBE) on a quarterly basis beginning in approximately 1996 (Appendix F). Selected samples collected from the wells beginning in approximately 1998 and 1999 were analyzed for fuel oxygenates (including MTBE, DIPE, TBA, ETBE and TAME) and 1,2-DCA (Appendix F). Petroleum free product was not observed in the Site wells. A historical summary of groundwater analytical data is provided in Appendix F; most recent groundwater data collected from Site monitoring wells on January 21, 2003 is illustrated in Figure 4. Isoconcentration contours of petroleum hydrocarbons in Site groundwater on January 21, 2003 and a historical isoconcentration of benzene from data collected prior to groundwater remediation (April 30, 1990; Delta, 1990) are presented in Figure 4; historical groundwater analysis data maps are included in previous quarterly monitoring reports submitted for the Site.

Water-quality data from wells sampled for the most recent quarterly monitoring event (first quarter 2003) are generally consistent with data presented in quarterly monitoring reports for the previous two to three years. Benzene was detected in samples from one on-site monitoring well (MW-3) at a concentration up to 13 ug/l (January 2003). The downgradient extent of petroleum hydrocarbons in groundwater is monitored at wells MW-4 through MW-10 (Figure 4). Benzene concentrations in well MW-6 have remained below 1 ug/l during ten successive quarters of monitoring. With the exception of trace concentrations of MTBE (up to 2.6 ug/l at MW-5) and

1,2-DCA (up to 11 ug/l at MW-5), petroleum hydrocarbons and fuel oxygenates were not detected in downgradient wells MW-4, MW-5 and MW-7 through MW-10 during the last year of monitoring (Appendix F).

Historical data indicate the highest concentrations of petroleum hydrocarbons in groundwater were detected at on-site well MW-3 and off-site well MW-6 (Appendix F). The most recent round of sampling results from well MW-3 indicate low concentrations of TPHg (280 ug/l), benzene (13 ug/l) and MTBE (5.9 ug/l) were detected (Figure 4). Concentrations up to 25,000 ug/l TPHg, 5,000 ug/l benzene and 20 ug/l MTBE were historically detected at MW-3 (Appendix F). The most recent results from off-site well MW-6 indicate only a trace concentration of MTBE (3 ug/l) was detected (Figure 4). Historical maximum concentrations up to 25,000 ug/l TPHg, 3,400 ug/l benzene and 89 ug/l MTBE were previously detected at MW-6 (Appendix F).

Quarterly monitoring data indicate the extent of petroleum hydrocarbons in groundwater has been characterized and perimeter wells (i.e., wells MW-4 and MW-7 through MW-10) indicate non-detect results for at least one hydrologic cycle. Relatively low (less than 13 ug/l) benzene concentrations are limited to the area of former extraction well MW-3 and low MTBE concentrations (less than 5.9 ug/l) are limited to the area of wells MW-3, MW-5 and MW-6 (Figure 4). Relatively consistent monitoring data during the previous two to three years indicate the petroleum hydrocarbon plume in groundwater is stable. Data from source area wells MW-2 and MW-3 (Figure 5) and downgradient well MW-5 (Figure 6) demonstrate a trend of decreasing and asymptotic concentrations. Residual hydrocarbon concentrations in Site groundwater are expected to continue to decrease as a result of biodegradation and/or other natural attenuation processes.

4.0 LOCAL HYDROGEOLOGY

The Site is located in the southeast portion of the Sacramento Valley and is underlain by Quaternary age alluvial and fluvial deposits, consisting primarily of poorly sorted clayey-silty sand and gravels underlain by sandstone, claystone and conglomerates, that thin in the eastern portion of the Central Valley and thicken to the southwest (RTD, 1995). The thickness of Quaternary age deposits beneath the Site is unknown but has been estimated to range from 70 to 400 feet below ground surface (RTD, 1995). Alluvial sediments consisting predominantly of sand and silty sand sediments were encountered in Site borings at depths ranging from ground surface to the maximum investigated depth of 60 feet bgs, with the exception of an approximate 10- to 15-foot thick gravelly sand unit that was encountered at approximately 25- to 35-feet bgs (Delta, 1990; Appendix D).

Results of hydraulic testing conducted by Delta in 1990 indicate the estimated transmissivity of the shallow groundwater zone at the Site is approximately 0.43 ft^2/min. The estimated transmissivity represents an average value obtained from two observation wells monitored during a pumping test performed at Site monitoring well MW-3 (Delta, 1990). Assuming a shallow-zone thickness of 20 feet, the estimated hydraulic conductivity is approximately 3.6×10^{-4} ft/s. The estimated range of hydraulic conductivity values is typical of sand/silty sand sediments (Freeze and Cherry, 1979). Groundwater velocity at the Site was calculated using the following equation:

$$\text{Groundwater velocity} = \frac{\text{hydraulic conductivity (K) x hydraulic gradient (i)}}{\text{effective porosity } (n_e)}$$

An estimated shallow groundwater flow velocity of 0.41 ft/day was calculated for the shallow groundwater zone based on a horizontal hydraulic gradient (i) of 0.004 ft/ft and an assumed effective porosity (n_e) of 0.3.

5.0 REMEDIATION ACTIVITIES

5.1 UST Removal and Soil Excavation Activities

Three fuel USTs and one waste oil UST were removed from the property by representatives of Ultramar between May and June 1990 as part of UST upgrades at the facility (Delta, 1990). The USTs were removed Fillner Construction, Inc. (Fillner) under the oversight of representatives of Delta Environmental, Ultramar, and the Sacramento County Fire Department (SCFD).

Fuel USTs removed from the Site in May 1990 included one 4,000-gallon premium fuel UST; one 10,000-gallon unleaded fuel UST; and one 10,000-gallon regular fuel UST. The two 10,000-gallon gasoline USTs were located side-by-side and their removal created a single UST basin. The one 4,000-gallon premium gasoline UST created a second UST basin. Soil samples were collected from the floor of each basin at the respective ends of each former UST location, from the base of the fuel pipe trenches (one sample every 20 lineal feet), and from stockpiled soils excavated during UST removal activities. Results of soil samples collected from the floor of the two UST basins indicated elevated levels of petroleum hydrocarbon compounds in vadose-zone soils beneath the former USTs (Appendix B).

Based on the results from stockpile sampling activities approximately 650 cubic yards of excavated petroleum-impacted soils were profiled and transported to Anderson Landfill in Shasta County, California, for proper disposal (Delta, 1990). Soils generated from the excavation of fuel piping were transported to Sacramento City landfill. USTs were transported to H&H Ship Service Company in San Francisco, California for metal salvaging (Delta, 1990).

In June 1990, an approximate 250-gallon waste oil UST was discovered and subsequently removed from the facility by Fillner under the oversight of Delta Environmental, and representatives of SCFD and Ultramar. Soil samples collected from the base of the waste oil basin were subjected to several analytical analyses, including petroleum hydrocarbons, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and selected metals by the waste extraction test (WET) method. Results of the analyses indicated that the samples were non-detect for petroleum hydrocarbons, VOCs and PCBs (Appendix B). Low concentrations of cadmium (0.012 milligrams/liter [mg/l]), chromium (0.066 mg/l), nickel (0.14 mg/l), lead (0.078 mg/l), and zinc (2.94 mg/l) were detected in the WET analysis. Based on the sampling results, SCEMD indicated that no further action regarding the waste oil UST was necessary and soil generated from the waste oil UST removal could be used for backfill in the waste oil excavation (Delta, 1990).

5.2 Soil Vapor Extraction and Treatment

Delta constructed a SVETS within the two UST basins at the Site and started vapor extraction activities in February 1991 (Delta, 1995). Delta installed extraction piping around the west, south, and eastern sides of the large UST basin at a depth of 14 feet bgs (Appendix G). Extraction piping was placed down the centerline of the smaller basin (former premium gasoline UST) at a depth of 10 feet bgs. Soil vapor was also extracted from wells VE-3, MW-2 and MW-3. Extraction piping was routed to a catalytic oxidizer treatment unit located at the east side of the Site (Appendix G). The design airflow rate through the SVETS was 350 scfm; typical zone of influence estimates for soil vapor extraction wells installed in silty sand/sand vadose-zone sediments range from approximately 10- to 30-foot radius.

5.3 Groundwater Extraction and Treatment

A groundwater extraction and treatment system (GWETS) was designed, installed and became operational concurrent with the SVETS in February 1991 (Delta, 1995). Two 4-inch diameter monitoring wells, MW-2 and MW-3, were converted to groundwater extraction wells and used to remove petroleum-hydrocarbon impacted groundwater and to increase the rate of natural degradation by increasing the levels of dissolved oxygen near source area wells. Well MW-3 contained the most elevated concentrations of petroleum hydrocarbons detected in on-site groundwater and is located hydraulically downgradient of former UST locations. Groundwater was treated by diffused aeration and vapors routed to the SVETS treatment unit. The groundwater treatment system was converted to a liquid-phase carbon treatment unit in April 1992. Approximately 3,600,000 gallons of groundwater were reportedly extracted for treatment through April 1994 (RTD, 1995). The estimated extent of the hydraulic capture zone for the GWETS was approximately 30 feet in the direction parallel to the groundwater gradient direction and approximately 190 feet perpendicular to the gradient direction (Appendix G; Delta, 1990).

5.4 Remediation Effectiveness

5.4.1 Soil Vapor Extraction and Treatment System

The SVETS was operated for approximately 8,500 hours between February 1991 through April 1992 and reportedly removed an estimated 3,400-gallons of gasoline from subsurface soils (Delta, 1995). In January 1992, soil samples were collected from four soil confirmation borings drilled adjacent to the UST basins, where elevated concentrations were previously detected at the base of the UST excavation (Delta 1990). With the exception of low levels of benzene (0.006 mg/kg), ethylbenzene (0.010 mg/kg), and total xylenes (up to 0.034 mg/kg) detected in soil samples collected in boring SCB-4, no other petroleum hydrocarbons constituents were detected in soil samples collected from the four confirmation borings. Operation of the SVETS was discontinued in April 1992 as a result of declining influent petroleum hydrocarbon concentrations (Figure 7) and results of soil confirmation sampling indicating petroleum hydrocarbons in vadose-zone soils were below target cleanup goals (Delta, 1995).

5.4.2 Groundwater Extraction and Treatment System

The GWETS was operated between February 1991 and June 1994 and reportedly removed an estimated 2.6-gallons of gasoline from groundwater (RTD, 1995). Prior to startup of the GWETS, the extent of benzene-impacted groundwater above MCLs, was estimated to extend laterally beyond MW-4 and MW-6 (approximately 200 feet wide) and longitudinally beyond MW-8 (approximately 300 feet long) southwest of the intersection of Greenback Lane and Walnut Avenue (Figure 4) (Delta, 1995). In February 1994, after three years of remediation, petroleum-impacted groundwater was projected to have diminished significantly, bounded laterally and distally within the intersection of Greenback Lane and Walnut Avenue (Delta, 1995). Operation of the GWETS was discontinued in June 1994 as a result of declining influent petroleum hydrocarbon concentrations (Figure 8).

Prior to startup of the GWETS, the concentrations of benzene detected in wells MW-2 and MW-3 were the highest of those detected in groundwater in the Site vicinity (Appendix F). Benzene concentrations in well MW-2 and MW-3 were reportedly 490 ug/l and 4.800 ug/l, respectively, in October 1989. The concentrations of benzene detected in extraction well MW-2 decreased significantly after startup of the GWETS and have remained below the EPA MCL for benzene since 1992 (Figure 5). Since startup of the GWETS, the concentrations of benzene detected in samples from MW-3 dropped to levels below the EPA MCL for benzene, and in the most recently sampling event (January 2003) the benzene concentration was 13 ug/l (Figure 5). Short-term fluctuations of petroleum hydrocarbon concentrations in groundwater are likely the result of the seasonal fluctuations of Site groundwater levels.

Monitoring well MW-5 is located off-site and hydraulically downgradient of well MW-3 (Appendix E). The concentrations of benzene detected in MW-5 decreased significantly after startup of the GWETS and have remained below the EPA MCL for benzene since June 1995 (Figure 6).

Quarterly groundwater monitoring results indicate the effectiveness of the groundwater remedial activities performed at the Site and the results of over seven years of natural attenuation following termination of the Site remedial systems. Results from the most recent groundwater monitoring activities conducted between May 2002 and January 2003 indicate benzene was detected at a concentration above the EPA MCL (i.e., 1 ug/l) in only one of ten monitoring wells (MW-3). The most recent monitoring results indicate the highest MTBE concentration (5.9 ug/l at MW-3, January 2003) is slightly above the California DHS secondary MCL for MTBE (i.e., 5 ug/l). Groundwater monitoring data indicate petroleum hydrocarbon concentrations are at trace to low levels and the petroleum hydrocarbon plume in groundwater appears to be stable. Residual hydrocarbon concentrations in Site groundwater are expected to continue to decrease as a result of biodegradation and/or other natural attenuation processes.

Based on calculated volumes of vapor phase and dissolved phase hydrocarbons extracted from the subsurface, RTD estimated that 99.97 percent of the hydrocarbon mass released to the subsurface was removed (RTD, 1995) and Delta estimated that 0.42-gallons of gasoline remained in the soil matrix and groundwater following termination of the remedial system operations (Delta, 1995).

6.0 BENEFICIAL USES OF GROUNDWATER AND WELL SURVEY RESULTS

The Site is located in a commercial/light industrial area approximately 4,000 feet west of Lake Natoma and 3.3 miles southwest of Folsom Dam (Figure 1). The designated beneficial uses of groundwater within the Central Valley Region include municipal (domestic), industrial and agricultural supply. Water supply for the Site and nearby facilities is provided by the Orangevale Water Company and Fair Oaks Water District from treated surface water at Folsom Lake (RTD, 1995).

6.1 Sensitive Receptor Survey Results

Previous investigations reviewed water supply well locations and beneficial uses of groundwater in the Site vicinity. A review of public records was conducted by RTD in 1995 and an updated review conducted by Azure personnel in March 2003 to identify drinking or irrigation water wells within a 2-mile radius of the Site (RTD, 1995). The results of the well survey identified the nearest water supply well was located approximately 1,400 feet east (i.e., upgradient to crossgradient) of the Site (RTD, 1995). The well was completed to a total depth of 107 feet and was reportedly used to supply water to a minnow tank. Two groundwater supply wells were identified approximately one-mile north (upgradient) and northwest (crossgradient) of the Site (RTD, 1995). A groundwater production well operated by the Fair Oaks Water District was identified approximately 1.5-miles southwest (hydraulically downgradient) of the Site. No additional wells were identified during the March 2003 file review.

The distance (i.e., greater than 1,400 feet) and direction (primarily upgradient or crossgradient) of the water supply wells identified in the Site vicinity far exceed the limited area of petroleum hydrocarbon impacts identified at the Site. Therefore, no impacts to current beneficial uses of groundwater were identified as a result of the sensitive receptor survey.

7.0 POTENTIAL CHEMICAL EXPOSURE PATHWAYS AND HEALTH RISKS

7.1 Introduction

Potential chemical exposure pathways were identified as part of the impact assessment conducted of the Site pursuant to the requirements of the UST Regulations (SWRCB, 1994). In addition to the potential impacts to beneficial uses of groundwater addressed in Section 6.1, potential health risks posed by residual levels of petroleum hydrocarbons in soil and groundwater include exposure to impacted soil and/or diffusing vapors.

Potential exposure pathways considered include, incidental ingestion of soil, inhalation of fugitive dusts, dermal contact to soil, and inhalation of volatile emissions from soil and groundwater. Ingestion of drinking water from the Site is not considered to be a complete exposure pathway because no sensitive receptors were identified in the Site vicinity (see Section 6.1). Though no plans are known to exist, future Site land use could potentially include Site redevelopment and construction of residential and/or commercial buildings. Because the Site could eventually be redeveloped for residential use, residential receptor exposure scenarios were evaluated in a screening level assessment. Results of the residential scenario assessments are

considered conservative and would be expected to overestimate the potential exposure to occupants of the Site under the commercial/industrial land use scenario.

Soil and groundwater screening level risk assessments for the potential inhalation risks were conducted using applicable risk-based screening level guidance provided by RWQCB-San Francisco Bay Region, Tier 1 Risk Based Screening Levels (RWQCB, 2001).

7.2 Identified Chemicals of Concern and Exposure Pathways

Investigation results indicate the chemicals of concern identified for soil include TPHg and benzene. The identified chemicals of concern in groundwater include TPHg, BTEX compounds, and MTBE (Table 2). Impacted soil generally occurs at depths below approximately 35 feet and direct access to soil is or would likely be restricted by surface pavement and building foundations at the Site. Therefore, the incidental ingestion of soil, inhalation of fugitive dusts, and dermal contact exposure pathways are considered to be incomplete under current and future Site land use. Under current Site land use, the potential exposure pathways appear to be limited to inhalation of volatile emissions from soil and groundwater to indoor air and the subsequent inhalation of the volatile BTEX compounds by commercial/industrial receptors. In the event of Site redevelopment for residential use, the potential exposure pathways appear to be limited to inhalation of volatile emissions from soil and groundwater into buildings, and the subsequent inhalation of the volatile BTEX compounds by residential receptors.

Of the volatile BTEX compounds detected in Site soil and groundwater, only benzene is classified as a carcinogen. Residual concentrations of benzene in soil and groundwater at the Site were reviewed to assess the potential for benzene volatilization from soil and groundwater into buildings under potential commercial and residential land use scenarios. No other volatile compounds presently classified as carcinogens were identified from soil and groundwater investigations at the Site.

7.3 Summary of Screening Health Risk Data

7.3.1 Soil Screening Level Assessment

The identified potential exposure pathways and chemicals of concern at the Site were evaluated and a soil screening level assessment conducted to estimate the concentration of benzene in Site soil that could pose a potential risk to future on-site residents. The only identified potential route of exposure to future residents is the potential risks posed by inhalation of volatile emissions from benzene in soil to indoor air. Additionally, the soil screening level assessment was conducted to estimate the concentrations of TPHg and BTEX compounds in Site soil that could pose a potential risk to groundwater quality. A summary of potential exposure pathways, receptor scenarios, petroleum hydrocarbon concentrations in Site soil, and applicable risk-based screening level guidance provided by RWQCB Tier 1 Risk Based Screening Levels (RWQCB, 2001) are summarized in Table 2.

Soil sampling results indicate a single benzene concentration of 0.006 mg/kg was detected only in the 38-foot depth sample from soil confirmation boring SCB-4-8 (Appendix B). TPHg was not detected and BTEX compounds were not detected in 11 of 12 confirmation soil samples

collected at the Site (Appendix C). RWQCB Tier 1 RBSLs for benzene in soil range between 0.18 mg/kg for the soil inhalation pathway to 0.045 mg/kg for soil leaching to groundwater pathway to residential receptors (Table 2).

The RWQCB provides Tier 1 RBSLs for TPHg (100 mg/kg), toluene (2.6 mg/kg), ethylbenzene (2.5 mg/kg), and total xylenes (1 mg/kg) in soil for the exposure pathway of soil leaching to groundwater (Table 2). Soil investigation results indicate TPHg was not detected (<1 mg/kg), and the maximum concentrations of toluene (0.005 mg/kg), ethylbenzene (0.01 mg/kg), and total xylenes (0.034 mg/kg) in soil are below the Tier 1 RBSLs.

In summary, results of the soil screening level evaluations indicate soil confirmation sampling results are below soil risk-based screening levels (Table 2). Therefore, residual concentrations of petroleum hydrocarbons in Site soil do not present a potential health risk concern or future threat to further groundwater degradation.

7.3.2 Groundwater Screening Level Assessment

Identified potential exposure pathways and chemicals of concern in Site groundwater were evaluated and a groundwater screening level assessment conducted to estimate the concentration of benzene in Site groundwater that could pose a potential risk to potential future on-site residents. The only complete potential route of exposure to future residents identified is the potential risks posed by inhalation of volatile emissions from benzene in groundwater to indoor air. Additionally, the groundwater screening level assessment was conducted to assess potential health risks posed by TPHg and MTBE compounds in Site groundwater.

A summary of potential exposure pathways, receptor scenarios, petroleum hydrocarbon concentrations in Site groundwater, and applicable risk-based screening level guidance provided by RWQCB Tier 1 RBSLs (RWQCB, 2001) are summarized in Table 3. Most recent groundwater sampling results collected in January 2003 indicate maximum concentrations for TPHg (280 ug/l), benzene (13 ug/l), and MTBE (5.9 ug/l) were detected in the groundwater samples from well MW-3 (Figure 4).

The RWQCB Tier 1 RBSLs for benzene in groundwater is 84 ug/l (coarse-grained soil) for the groundwater volatilization and inhalation pathway (Table 3). Based on lithologic data collected at the Site, it appears the vadose-zone soil consists primarily of relatively coarse-grained sandy soil (Appendix D). Comparison with the Tier 1 RBSL indicate the maximum benzene concentration in Site groundwater does not exceed the Tier 1 RBSL for the groundwater volatilization and inhalation pathway (Table 3). Therefore, there are no apparent potential health risks for the groundwater volatilization pathway at the Site.

Groundwater sampling results indicate benzene, MTBE and TPHg concentrations in the most recent sample analysis results collected in January 2003 from monitoring well MW-3 were slightly higher than drinking water standards for those compounds (Table 3). Based on groundwater monitoring results, these compounds appear to be restricted to a limited area adjacent to the former UST and do not appear be present in groundwater at concentrations that could present a potential threat to beneficial uses of groundwater (Figure 4). Petroleum hydrocarbon concentrations in Site groundwater are expected to continue to decrease as a result

of biodegradation and/or other natural attenuation processes. Therefore, potential risks to further groundwater degradation posed by past release(s) of petroleum hydrocarbons at the Site appear minimal and are not recommended to require further remedial actions.

8.0 RECOMMENDATION FOR CASE CLOSURE

Results of soil investigations at the Site indicate petroleum hydrocarbons remaining in Site soil are restricted to a relatively small area and are below concentration levels that would be considered a potential threat to further groundwater degradation. Remedial measures that included operation of the soil vapor and groundwater extraction and treatment remedial systems at the Site have effectively reduced petroleum hydrocarbon concentrations to concentrations below risk-based screening levels in soil and groundwater. Groundwater investigation and monitoring data indicate petroleum hydrocarbons remaining in Site soil and groundwater appear to be restricted to a limited area adjacent to the former UST and do not appear be present at concentrations that could present a potential threat to occupants or to beneficial uses of groundwater in the Site vicinity. The petroleum hydrocarbon plume appears to be stable and residual petroleum hydrocarbons in Site groundwater are expected to continue to decline as a result of biodegradation and other natural attenuation processes.

Due to the low risk conditions posed by residual petroleum hydrocarbons in Site soil and groundwater, case closure is recommended. Upon the SCEMD approval of case closure, the Site monitoring wells would be decommissioned in accordance with Department of Water Resources and SCEMD regulations.

9.0 SELECTED REFERENCES

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Remediation Testing and Design (RTD), 1995. Summary of Rationale for Closure of the Beacon Station No. 685, 9301 Greenback Lane, Orangevale, California. April 26.

Sacramento County Environmental Management Department, 2002. Letter to Ultramar indicating that facility may be a candidate for low risk groundwater closure. Beacon Station No. 685, 9301 Greenback Lane, Orangevale, California. February 11.

TABLE 1
SUMMARY OF MONITORING WELL CONSTRUCTION DATA
9301 Greenback Lane, Orangevale

	Well Number				
	MW-1	MW-2	MW-3	MW-4	MW-5
Date of Well Completion	Jul-89	Jul-89	Jul-89	Feb-90	Feb-90
Top of Casing Elevation (ft MSL)	273.00	269.64	269.03	269.79	267.73
Casing Diameter (in.)	4	4	4	2	4
Total Well Depth (ft.)	60	60	60	60	60
Slotted Casing Depth Interval (ft)	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60
Filter Pack Depth Interval (ft)	38 - 60	38 - 60	38 - 60	38 - 60	38 - 60
Bentonite Seal Depth Interval (ft)	36 - 38	36 - 38	36 - 38	36 - 38	36 - 38
Grout Depth Interval (ft)	0 - 36	0 - 36	0 - 36	0 - 36	0 - 36
Casing Type	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC
Slot Type	0.010 - inch	0.010 - inch	0.010 - inch	0.010 - inch	0.010 - inch
Filter Pack Type	No. 3 sand	No. 3 sand	No. 3 sand	No. 3 sand	No. 3 sand

	Well Number				
	MW-6	MW-7	MW-8	MW-9	MW-10
Date of Well Completion	Feb-90	May-90	May-90	Apr-99	Apr-99
Top of Casing Elevation (ft MSL)	271.25	261.66	266.02	267.07	270.80
Casing Diameter (in.)	2	2	2	2	2
Total Well Depth (ft.)	60	60	60	55	55
Slotted Casing Depth Interval (ft)	40 - 60	40 - 60	40 - 60	39.5 - 55	38 - 55
Filter Pack Depth Interval (ft)	38 - 60	38 - 60	36 - 60	38 - 55	36 - 55
Bentonite Seal Depth Interval (ft)	36 - 38	34 - 38	32 - 36	35.5 - 38	34 - 36
Grout Depth Interval (ft)	0 - 36	0 - 34	0 - 32	0 - 35.5	0 - 34
Casing Type	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC	Sched 40 PVC
Slot Type	0.010 - inch	0.010 - inch	0.010 - inch	0.020 - inch	0.020 - inch
Filter Pack Type	No. 3 sand	No. 3 sand	No. 3 sand	No. 3 sand	No. 3 sand

NOTES: ft MSL - feet above mean sea level

TABLE 2
COMPARISON OF SITE SOIL DATA TO RISK-BASED SCREENING LEVELS
9301 Greenback Lane, Orangevale

Exposure Pathway		Receptor Scenario	Soil Sample Concentrations (maximum)					RWQCB Tier 1 RBSLs - Indoor Air Impacts and Groundwater Protection				
			Benzene**	Toluene**	Ethylbenzene**	Xylenes**	TPHg*	Benzene	Toluene	Ethylbenzene	Xylenes	TPHg
Soil-vapor intrusion from soil to buildings	Potential	Residential	0.006	0.005	0.01	0.034	<1	0.18	30	76	210	NA
	Potential	Commercial	0.006	0.005	0.01	0.034	<1	0.39	89	220	210	NA
Soil leaching (ground water protection)	Incomplete	Residential	0.006	0.005	0.01	0.034	<1	0.045	2.6	2.5	1	100

Notes:

All concentrations in mg/kg

* - TPHg not detected in soil confirmation samples.

** - BTEX compounds detected in 1 of 12 soil samples.

NA = not applicable

RBSL - Risk Based Screening Level

Benzene cancer risk based on 1 excess cancer in exposed population of 1,000,000 (Residential) or 100,000 (Commercial)

TABLE 3
COMPARISON OF SITE GROUND-WATER DATA TO RISK-BASED SCREENING LEVELS AND DRINKING WATER STANDARDS
9301 Greenback Lane, Orangevale

Exposure Pathway		Receptor Scenario	Site Ground-Water Concentrations (maximum)			RWQCB Tier 1 RBSLs - Indoor Air Impacts**			RWQCB Tier 1 RBSLs/MCLs - Drinking Water		
			Benzene	MTBE	TPHg	Benzene	MTBE	TPHg	Benzene	MTBE	TPHg
Ground water-vapor intrusion from ground water to buildings	Potential	Residential	**13**	**5.9**	**280**	84	50,000	NA	NA	NA	NA
	Potential	Commercial	**13**	**5.9**	**280**	350	210,000	NA	NA	NA	NA
Ground water ingestion	Incomplete*	Residential	**13**	**5.9**	**280**	NA	NA	NA	**1**	**5**	**100**

Notes:

All concentrations in parts per billion (ppb or ug/l)

Site concentrations represent maximum concentrations detected in most recent groundwater samples (Appendix F).

NA – not applicable

* - Incomplete exposure pathway (see Section 6.0).

** - Value based on coarse-grained soils (RWQCB, 2001).

RBSL - Risk Based Screening Level

Benzene cancer risk based on 1 excess cancer in exposed population of 1,000,000 (Residential) or 100,000 (Commercial)

MCLs - Maximum Contaminant Levels; Table presents lowest numerical value from EPA and State of CA primary and secondary MCL standards.

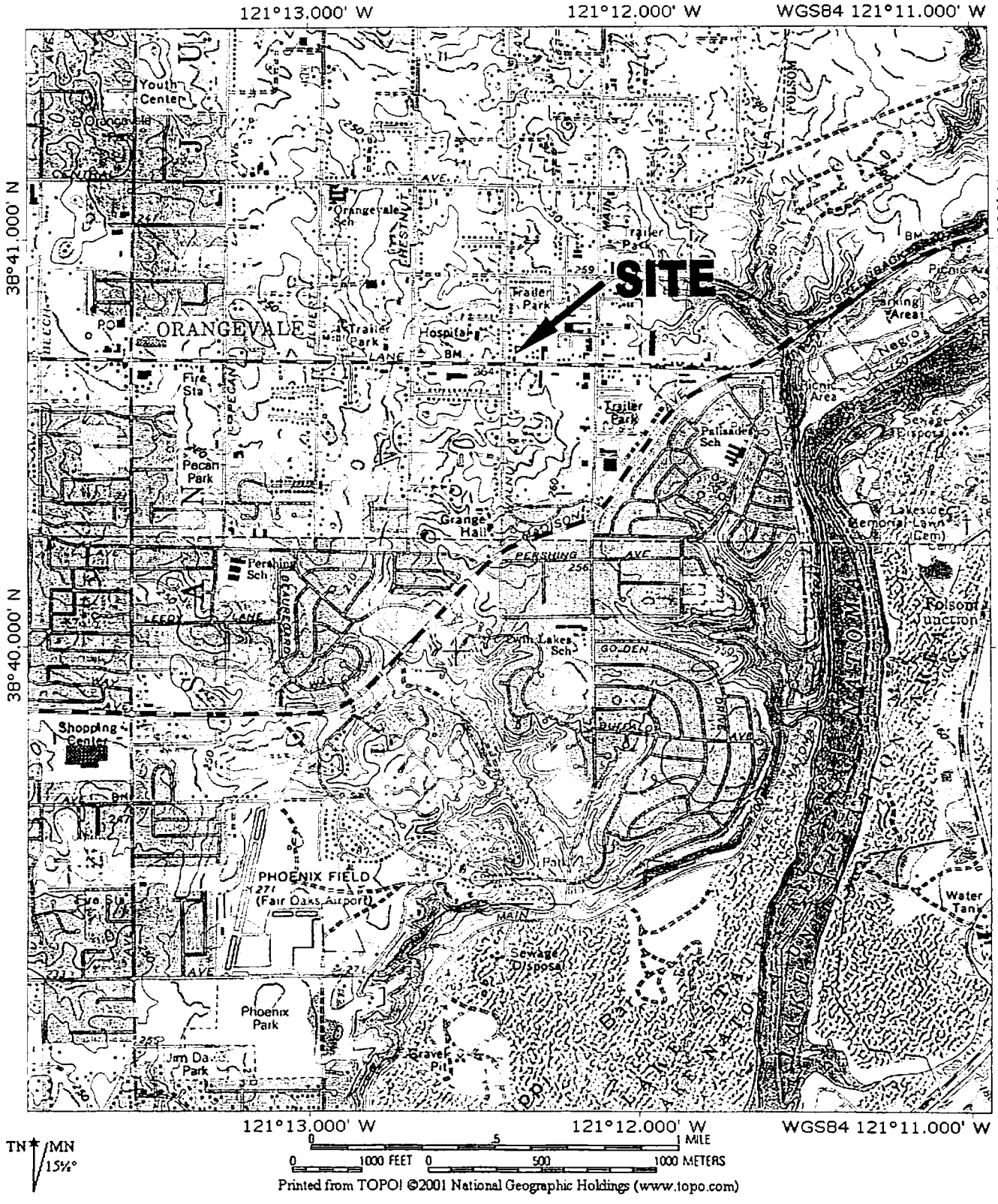

Figure 1: Site Vicinity Map

AZURE ENVIRONMENTAL AZ142-017

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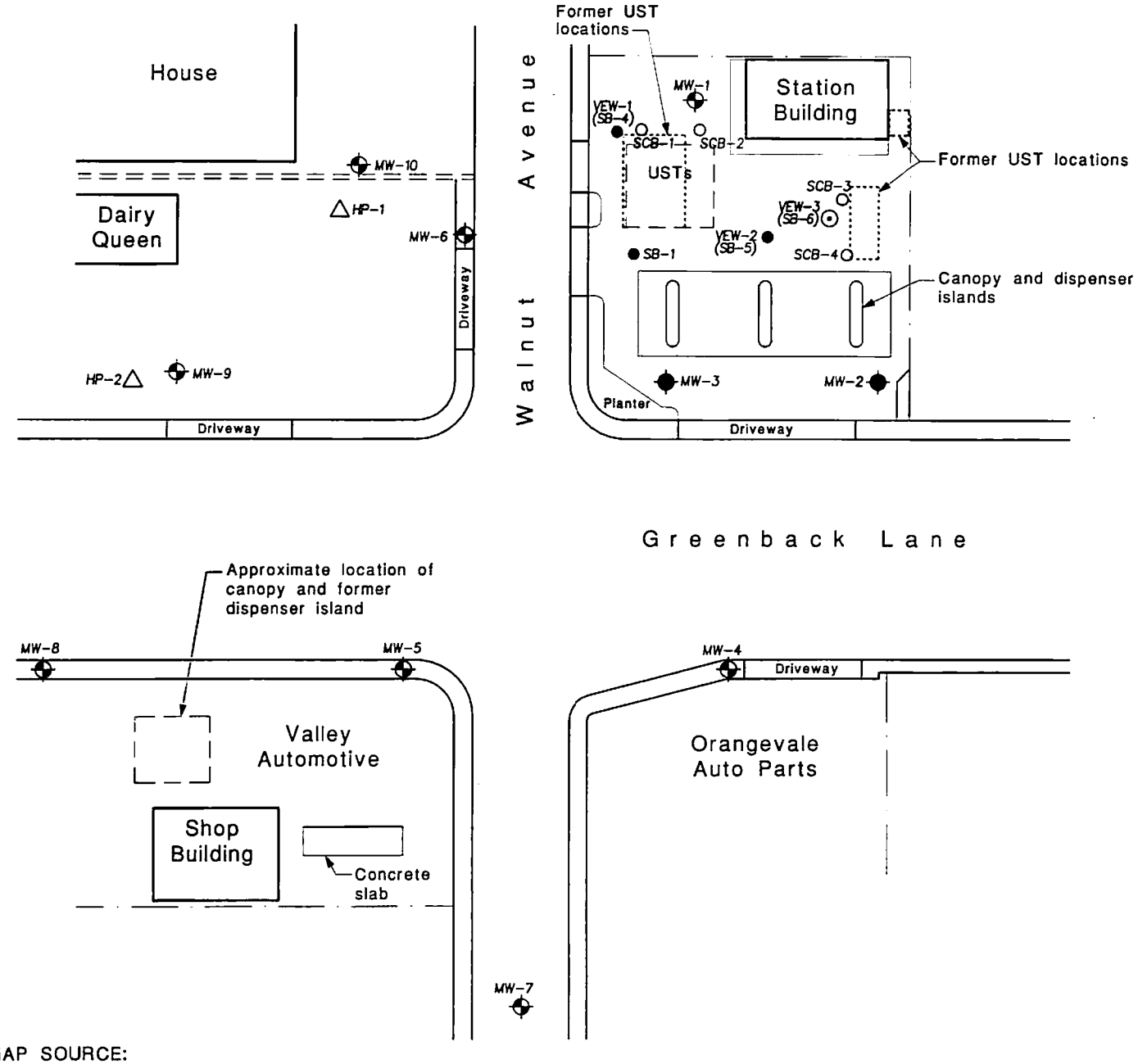

MAP SOURCE:
RDM Environmental, 4/8/02

EXPLANATION

- Ground-water monitoring well location
- Former vapor extraction well location
- Former ground-water extraction well location
- Soil boring location
- Soil confirmation boring location
- Hydropunch groundwater sample location

0 50'

NORTH

Figure 2: Site Map

AZURE ENVIRONMENTAL AZ142-017

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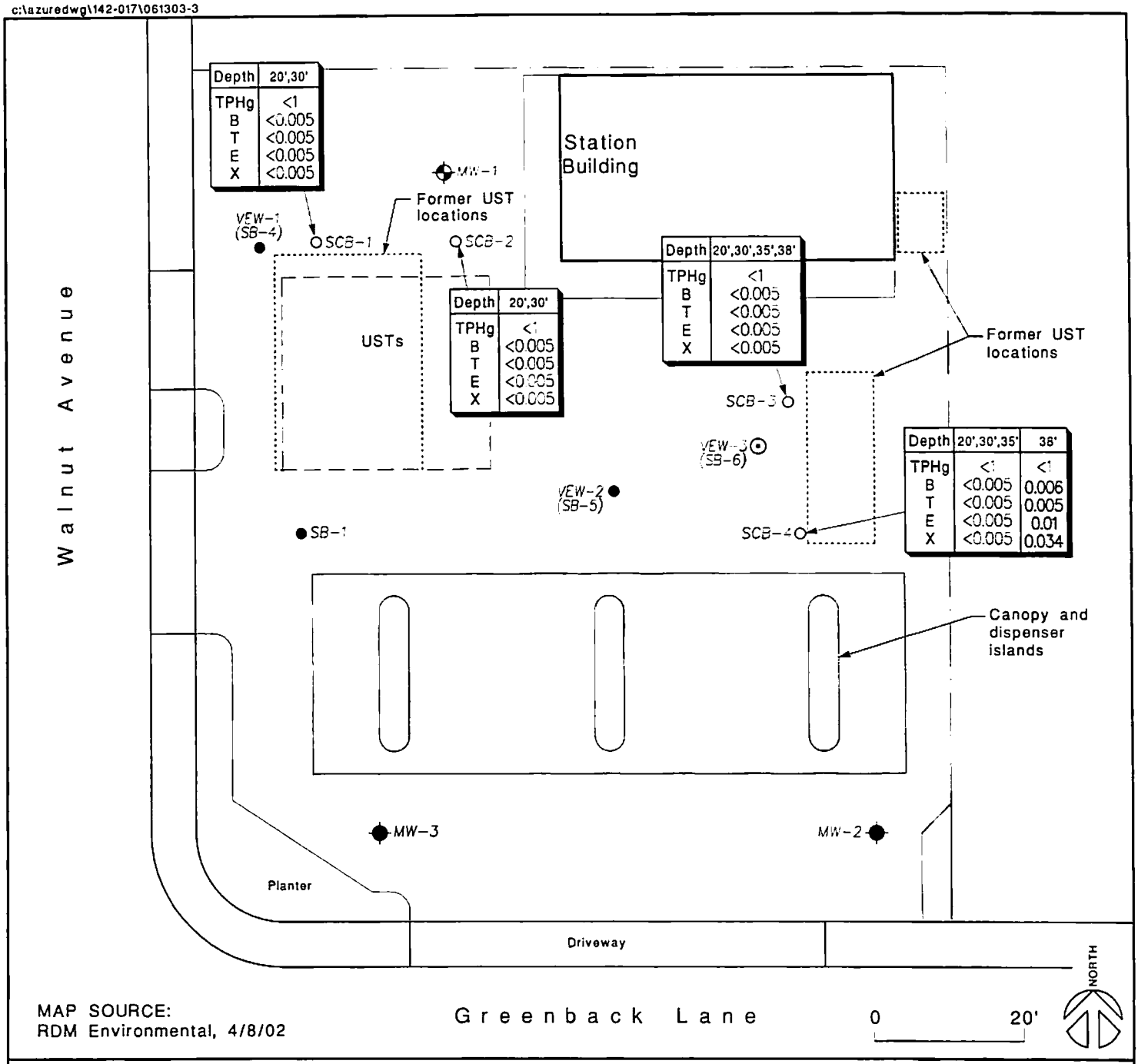

MAP SOURCE:
RDM Environmental, 4/8/02

EXPLANATION

- Ground-water monitoring well location
- Former vapor extraction well location
- Former ground-water extraction well location
- Soil boring location
- Soil confirmation boring location

Depth	20',30',35'	38'
TPHg	<1	<1
B	<0.005	0.006
T	<0.005	0.005
E	<0.005	0.01
X	<0.005	0.034

Sample depth (feet)
Chemical concentration (mg/kg)

TPHg - Total petroleum hydrocarbon as gasoline
B - Benzene
T - Toluene
E - Ethylbenzene
X - Total xylenes

Figure 3: Site Map Showing Confirmation Soil Sampling Results

AZURE ENVIRONMENTAL AZ142-017

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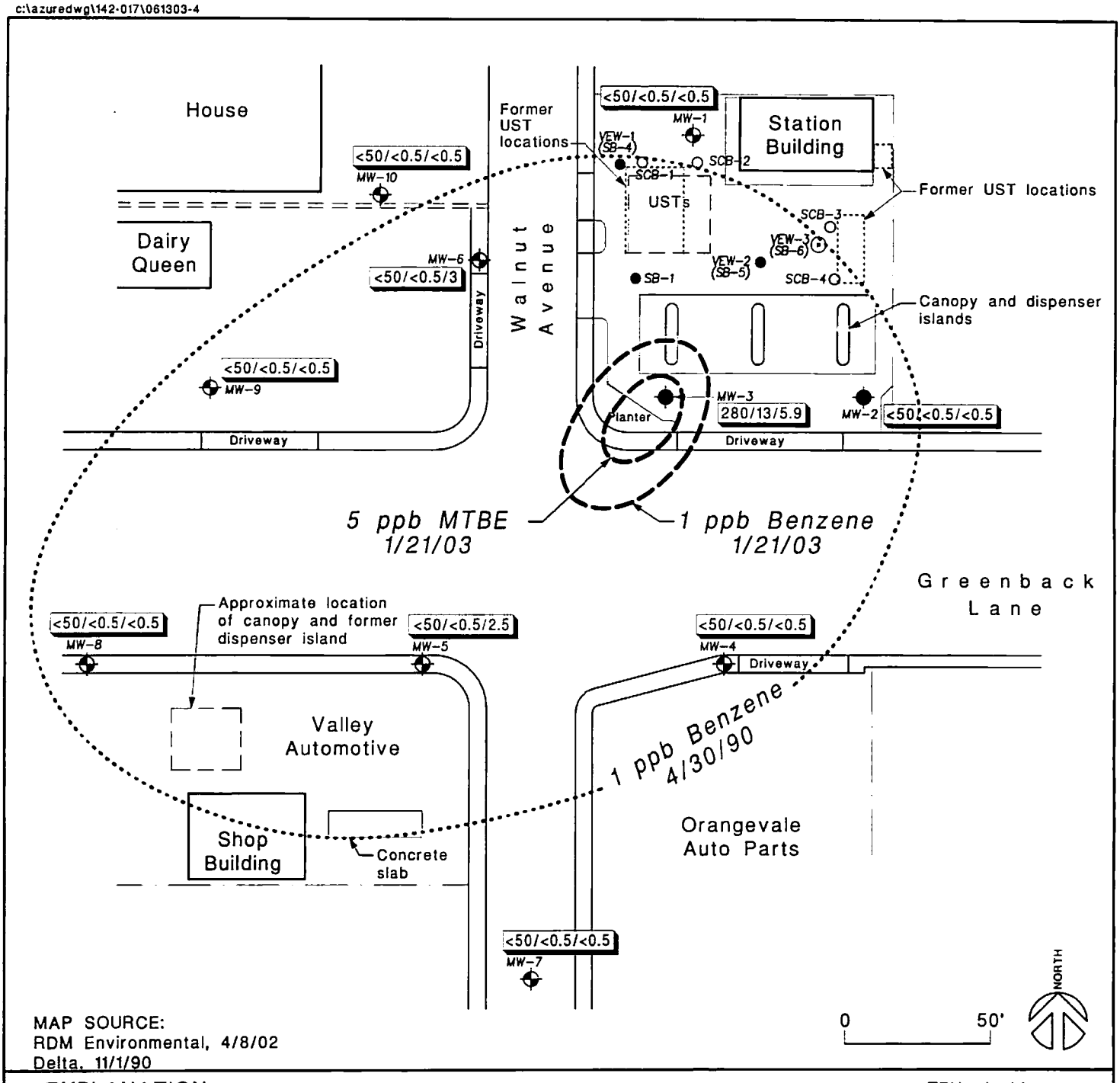


MAP SOURCE:
RDM Environmental, 4/8/02
Delta, 11/1/90

EXPLANATION

- Ground-water monitoring well location
- Former vapor extraction well location
- Former ground-water extraction well location
- Soil boring location
- Soil confirmation boring location
- TPHg (ppb)
- Benzene (ppb)
- 280/13/5.9 — MTBE (ppb)
- Estimated isoconcentration lines (ppb)

Figure 4: Groundwater Sampling Results - January 21, 2003

AZURE ENVIRONMENTAL AZ142-017

Figure 5: Historical Benzene Concentrations in Extraction Wells MW-2 and MW-3

9301 Greenback Lane, Orangevale, CA (Site #67090)

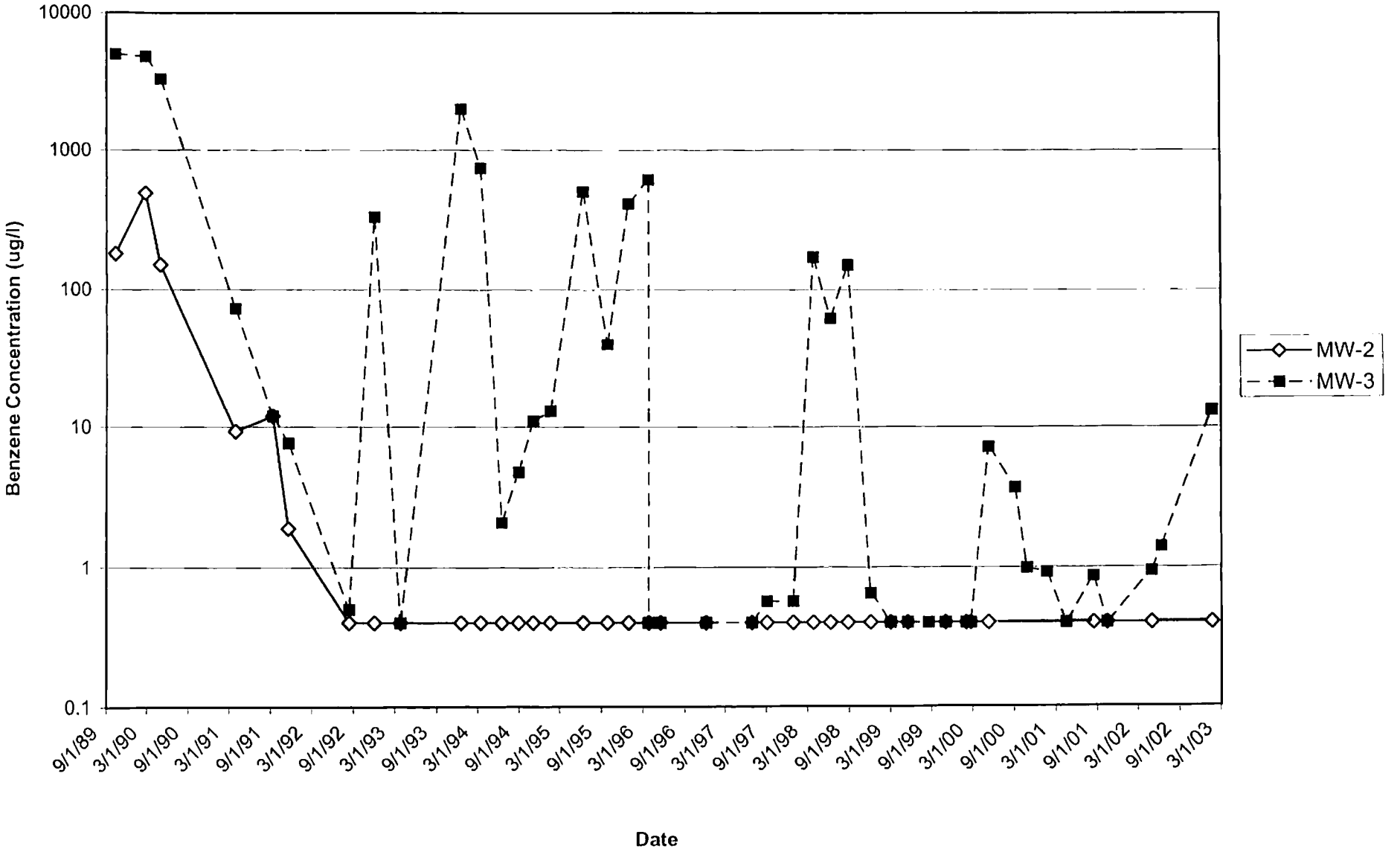


Figure 6: Historical Benzene Concentrations in Downgradient Well MW-5

9301 Greenback Lane, Orangevale, CA (Site #67090)

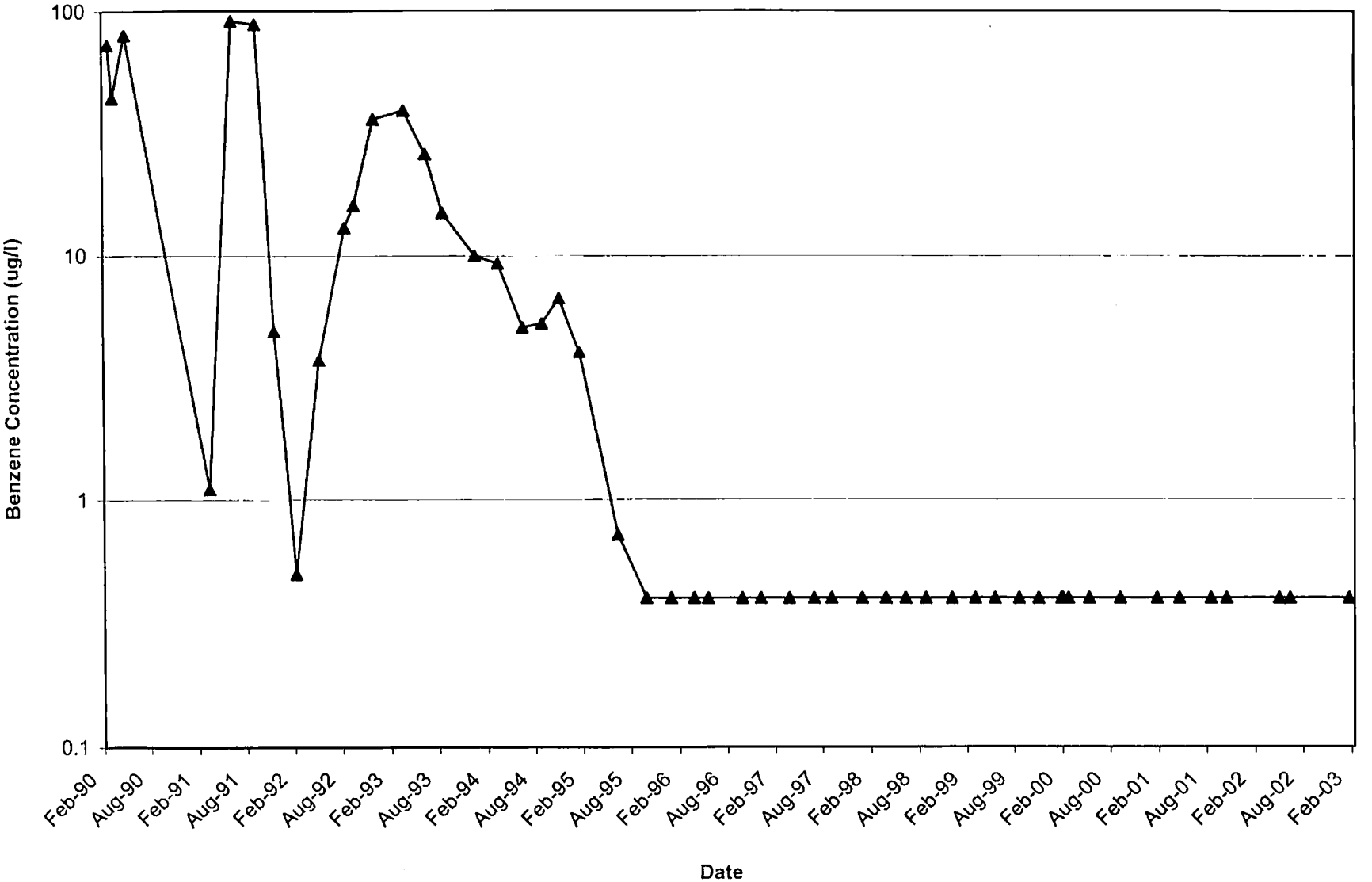


Figure 7: Summary of Soil Vapor Extraction System Influent Data

9301 Greenback Lane, Orangevale, CA (Site #67090)

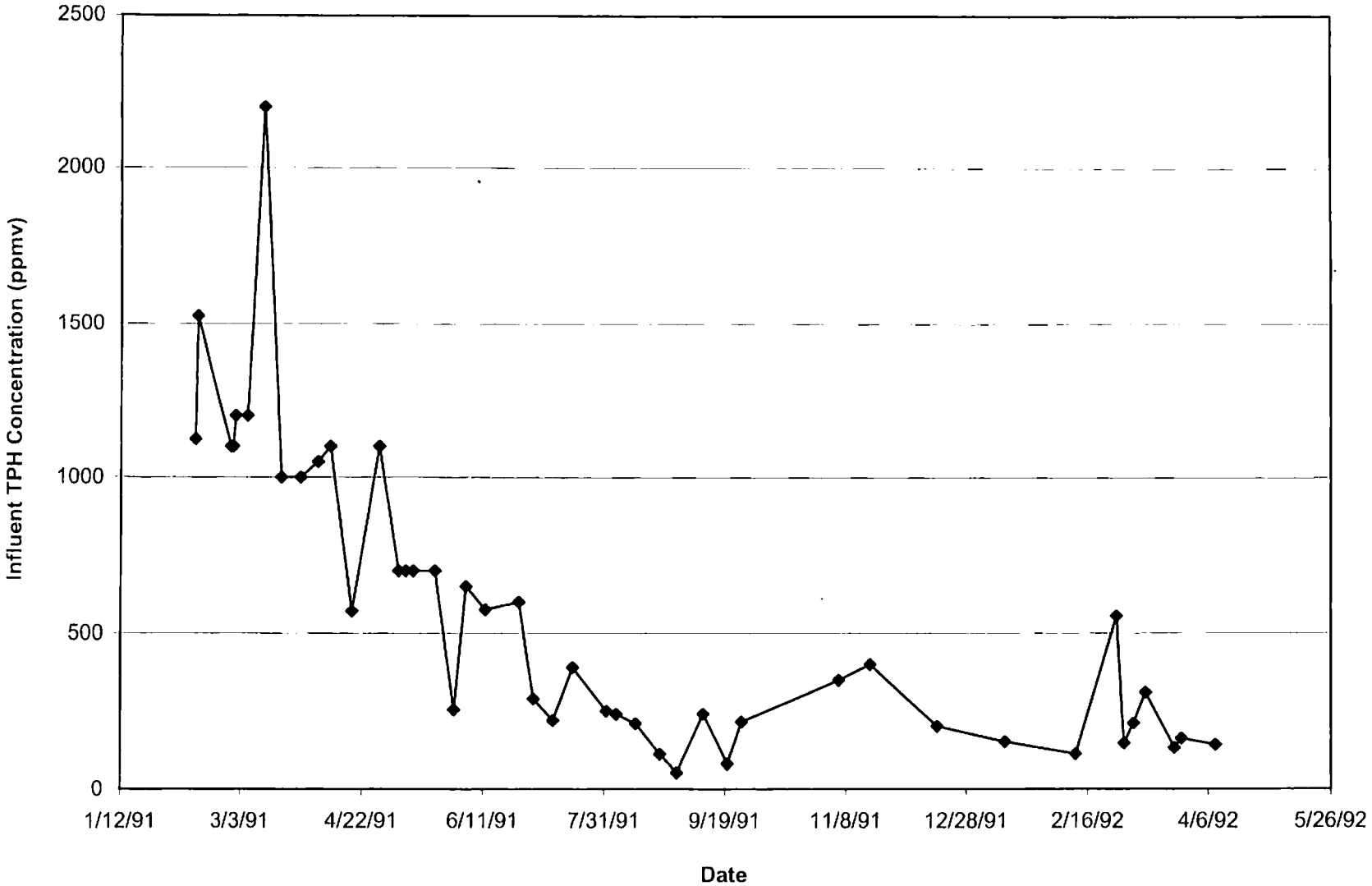
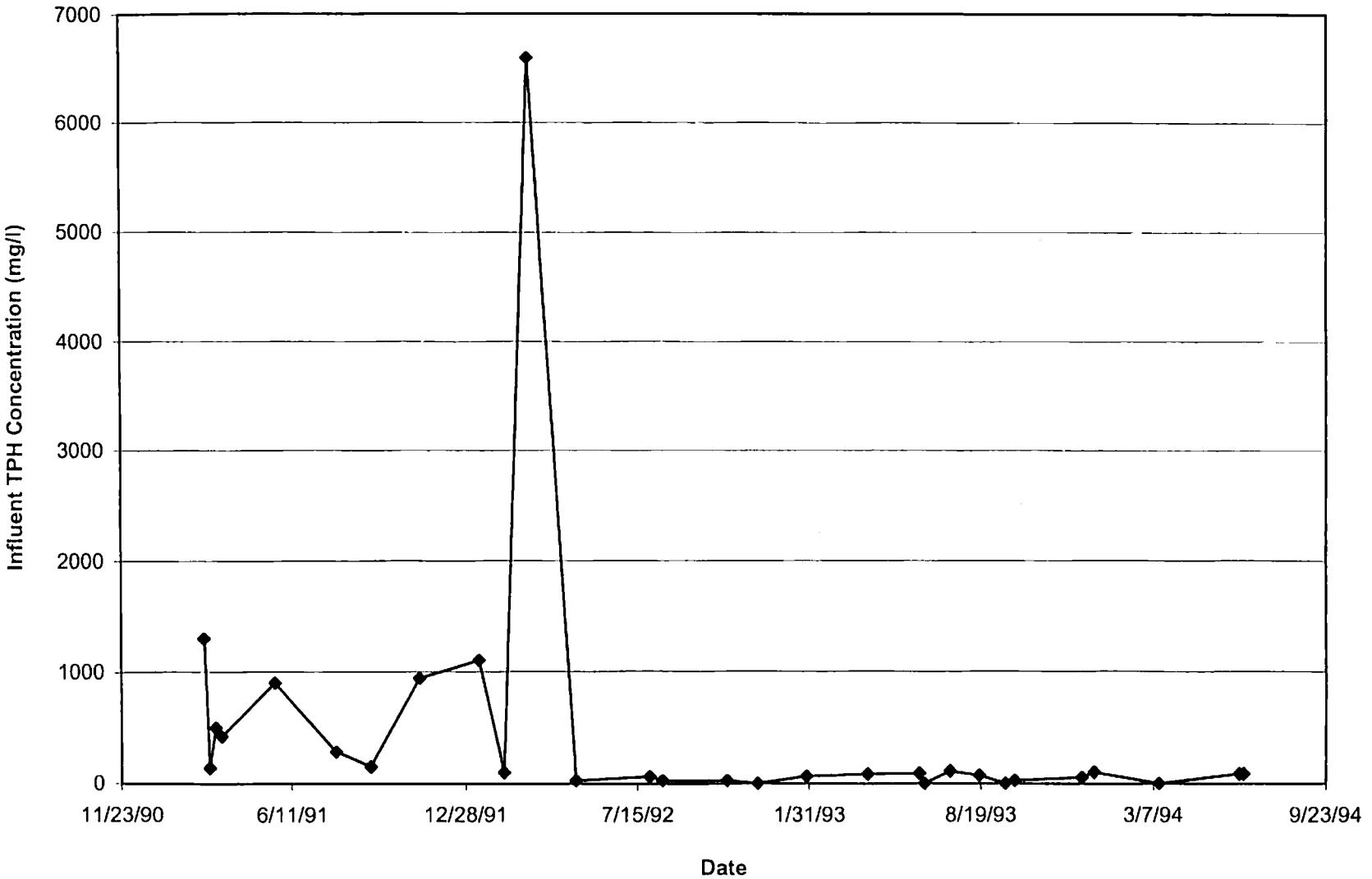


Figure 8: Summary of Groundwater Extraction System Influent Data

9301 Greenback Lane, Orangevale, CA (Site #67090)



APPENDIX A:
RECORD OWNER OF FEE TITLE HOLDER NOTIFICATION

TESORO

Tesoro Petroleum Companies, Inc.
Corporate Environmental Affairs
3450 South 344th Way, Suite 100
Auburn, WA 98001-5931
253 896 8700
253 896 8887 Fax

August 1, 2003

VIA CERTIFIED MAIL

Stickler Vance Partnership
Attn: Thala Wolin
11121 Upper Previtali Road
Jackson, CA 95642

RE: Notification of Request for Case Closure
Former Beacon Station, 9301 Greenback Lane
Orangevale, California

Dear Ms. Wolin:

This letter is to provide notification to the fee title holder for property at 9301 Greenback Lane, that Tesoro Refining and Marketing Company will submit a case closure request to the Sacramento County Environmental Management Department (SCEMD). This notification is provided in accordance with SCEMD guidelines.

Please feel free to call me at 253/896-8700 or Jeff Hennier of Azure Environmental at 415/460-1561 if you have any questions.

Sincerely,

Catherine Runden

Catherine Runden
Environmental Projects Coordinator
Tesoro Petroleum Companies, Inc.

cc: Susan Erikson, SCEMD
Jeff Hennier, Azure Environmental
Brian Kelleher, Kelleher & Associates

APPENDIX B

SUMMARY OF UST REMOVAL AND SOIL STOCKPILE SAMPLE RESULTS (DELTA, 1990; 1995)

TABLE 3

ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM GASOLINE TANK PIT AND PRODUCT LINE EXCAVATIONS
Concentrations in milligrams per kilogram (mg/kg)

Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

Sample No.	Date	Depth (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH[a] as gasoline	Total Lead
Tank Pit Samples								
Prem. Unl. N. End	05/22/90	14	820	1,200	260	1,200	16,000	NA[b]
Prem. Unl. S. End	05/22/90	14	930	1,000	49	140	17,000	NA
Unleaded N. End	05/22/90	14	84	81	25	200	2,500	2.2
Unleaded S. End	05/22/90	14	0.8	0.3	<0.1	1.8	59	1.3
Leaded N. End	05/22/90	14	140	160	4.3	520	6,300	3.8
Leaded S. End	05/22/90	14	0.1	0.1	<0.1	0.3	11	13
Product Line Samples								
PT-1	06/18/90		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PT-2	06/18/90		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PT-3	06/18/90		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PT-4	06/18/90		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PT-5	06/18/90		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PT-6	06/18/90		<0.1	<0.1	<0.1	1.3	19	<0.1

[a] Total petroleum hydrocarbons.
[b] Not analyzed.

TABLE 4

ANALYTICAL RESULTS FOR SOIL SAMPLES
COLLECTED FROM THE WASTE OIL TANK PIT

Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

Sample No.	Depth (ft)	Date	Benzene (mg/kg[d])	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH[a] as gasoline (mg/kg)	TPH as diesel (mg/kg)	TOG[b] (mg/kg)	VOC[c] (µg/L[e])	Cadmium (mg/L[f])	Chromium (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)
WO-1	8	06/22/90	<0.1	<0.1	<0.1	<0.1	<1.0	<5	<50	<5	NA[g]	NA	NA	NA	NA
WO-2	8	06/26/90	NA	NA	NA	NA	NA	NA	NA	NA	0.012	0.066	0.078	0.14	2.94

[a] Total petroleum hydrocarbons.
[b] Total oil and grease.
[c] Volatile organic compounds.
[d] Milligrams per kilogram.
[e] Micrograms per liter.
[f] Milligrams per liter.
[g] Not analyzed.

TABLE 3

Soil Sample Analytical Results of Stockpiled Soil (ppm)

Soils From Gasoline Tank Excavation	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH[a]	TPH[b]	Organic Lead	Total Lead
Spoils #1 (NSEW) 05/22/90	1.2	1.6	2.1	12	160	9.3	0.1	NA[c]
Spoils #2 (1-4) 05-22-90	<0.1	<0.1	<0.1	0.2	8.7	5.5	ND[d]	NA
Spoils #2 (5-8) 05-22-90	<0.1	<0.1	0.3	1.0	23	9.5	0.1	NA
Spoils #3 (1-4) 05-22-90	<0.1	<0.1	<0.1	<0.1	24	14	ND	NA
Spoils #3 (5-8) 05-22-90	NA	NA	NA	NA	NA	16	NA	NA
Spoils #4 (1-4) 05-22-90	270	500	130	590	5,400	<10	ND	NA
Spoils #4 (1-4) 05-29-90	2.3	24	15	34	830	<5.0	ND	5.9
Spoils #5 (1-4) 05-23-90	<0.1	20	7.0	120	880	9.9	3.1	8.1
Spoils #5 (5-8) 05-23-90	<0.1	5.7	42	2.5	300	9.4	1.2	8.0
Spoils #6 (1-4) 05-24-90	<0.1	<0.1	<0.1	12	16	<5.0	2.3	5.5
Spoils #6 (5-8) 05-24-90	6.0	14	6.5	83	810	<5.0	1.8	5.5
Spoils A (1-4) 06-18-90	<0.1	<0.1	<0.1	0.7	6.6	NA	<0.01	4.6
Spoils B (1-2) 06-18-90	<0.1	<0.1	<0.1	<0.1	1.6	NA	<0.01	4.5

[a]Total petroleum hydrocarbons as gasoline.
[b]Total petroleum hydrocarbons as diesel.
[c]Not analyzed.
[d]Not detected.

TABLE 4

Soil Sample Analytical Results
Waste Oil Tank Excavation

Sample WO-1 Collected 06/22/90

Compound	Concentration
Benzene	<0.1 ppm
Toluene	<0.1 ppm
Ethylbenzene	<0.1 ppm
Xylenes	<0.1 ppm
TPH (gasoline)	<1.0 ppm
TPH (diesel)	<5 ppm
TOG	<50 ppm
PCB	ND
Chlorinated Hydrocarbons	
Benzene	—
Bromomethane	<5.0 ppb
Bromodichloromethane	<5.0 ppb
Bromoform	<5.0 ppb
Carbon tetrachloride	<5.0 ppb
Chlorobenzene	<5.0 ppb
Chloroethane	<5.0 ppb
2-Chloroethylvinyl ether	<5.0 ppb
Chloroform	<5.0 ppb
Chloromethane	<5.0 ppb
Dibromochloromethane	<5.0 ppb
1,1-Dichloroethane	<5.0 ppb
1,2-Dichloroethane	<5.0 ppb
1,1-Dichloroethene	<5.0 ppb
trans-1,2-Dichloroethane	<5.0 ppb
1,2-Dichloropropane	<5.0 ppb
1,3-Dichloropropene	<5.0 ppb
Ethylbenzene	—
Methylene chloride	<5.0 ppb
1,1,2,2-Tetrachloroethane	<5.0 ppb
Tetrachloroethane	<5.0 ppb
1,1,1-Trichloroethane	<5.0 ppb
1,1,2-Trichloroethane	<5.0 ppb
Trichloroethene	<5.0 ppb
Toluene	—
Vinyl chloride	<5.0 ppb
1,2-Dichlorobenzene	—
1,3-Dichlorobenzene	—
1,4-Dichlorobenzene	—
Total xylenes	—

Sample WO-2 Collected 06/26/90

Cd	0.012 mg/L
Cr	0.066 mg/L
Ni	0.14 mg/L
Pb	0.078 mg/L
Zn	2.94 mg/L

ND = Not detected.

APPENDIX C

SUMMARY OF SOIL ANALYTICAL RESULTS (DELTA, 1995)

TABLE 2

ANALYTICAL RESULTS FOR SOIL
SAMPLES COLLECTED FROM BORINGS
Concentrations in milligrams per kilogram (mg/kg)

Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH[a] as gasoline
SB-1	25.5	05/17/88	2.79	1.67	ND	17.53	237.94
	35.5	05/17/88	ND[b]	ND	ND	ND	ND
	45.5	05/17/88	ND	ND	ND	ND	ND
	50.0	05/17/88	ND	ND	ND	ND	ND
MW-1	30	07/26/89	<0.02	<0.02	<0.02	<0.02	<5
MW-2	25	07/27/89	<0.02	<0.02	<0.02	<0.02	<5
MW-3	35	07/28/89	0.12	0.12	<0.02	<0.02	<5
VEW-1	10	07/28/89	<0.02	<0.02	<0.02	<0.02	<5
VEW-2	45	07/28/89	1.17	0.98	0.37	2.55	53.64
VEW-3	20	07/28/89	3.59	45.08	24.62	243.44	2,868.36
VEW-3	35	07/28/89	6.93	88.07	58.09	452.49	5,703.36
MW-4-6	30	02/22/90	<0.1	<0.1	<0.1	<0.1	<0.1
MW-4-10	50	02/22/90	<0.1	<0.1	<0.1	<0.1	<0.1
MW5-8	40	02/22/90	<0.1	<0.1	<0.1	<0.1	<0.1
MW5-9	45	02/22/90	<0.1	<0.1	<0.1	<0.1	<0.1
MW6-9	45	02/22/90	0.2	<0.1	<0.1	<0.1	1.3
MW6-10	50	02/22/90	<0.1	<0.1	<0.1	<0.1	1.6
MW7-8	40	05/21/91	<0.1	<0.1	<0.1	<0.1	<0.1
MW7-9	45	05/21/91	<0.1	<0.1	<0.1	<0.1	<0.1
MW8-8	40	05/21/91	<0.1	<0.1	<0.1	<0.1	<0.1
MW8-9	45	05/21/91	<0.1	<0.1	<0.1	<0.1	<0.1
SCB-1-4	20	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-1-6	30	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-2-4	20	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-2-6	20	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-3-4	20	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-3-6	30	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0

TABLE 2-Continued

ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED FROM BORINGS

Concentrations in milligrams per kilogram (mg/kg)

Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

Sample ID	Depth (ft)	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH[a] as gasoline
SCB-3-7	35	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-3-8	38	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-4-4	20	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-4-6	30	01/27/92	<0.005	<0.005	<0.005	<0.005	<1.0
SCB-4-7	35	01/27/92	<0.005	<0.005	<0.005	0.027	<1.0
SCB-4-8	38	01/27/92	0.006	0.005	0.010	0.034	<1.0

[a] Total petroleum hydrocarbons.
[b] Not detected. Detection limit not reported.

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS

Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

Sample ID	Depth (ft)	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH as gasoline (mg/kg)	Oxygenate Compounds (mg/kg)	1,2 DCA (mg/kg)	Total Lead (mg/kg)
Soil Borings										
MW-9	26	04/28/99	ND	ND	ND	ND	ND	ND	ND	NA
	36.5	04/28/99	<0.0050	ND	ND	ND	ND	ND	ND	NA
MW-10	41.5	04/28/99	ND	ND	ND	ND	ND	ND	ND	NA
		04/28/99	ND	ND	ND	ND	ND	ND	ND	NA
Soil Stockpile										
SP-1A,B	41.5	04/28/99	ND	ND	ND	ND	ND	ND	ND	ND

TPH = Total petroleum hydrocarbons.
DCA = Dichloroethane.
Oxygenate Compounds = Methyl-tertiary-butyl ether, diisopropyl ether, ethyl-t-butyl ether, tert-amyl methyl ether, tert butanol, methanol and ethanol.
NA = Not analyzed.
ND = Not detected above the laboratory's reporting limits.

TABLE 1

ANALYTICAL RESULTS FOR SOIL
SAMPLES COLLECTED FROM BORINGS

Beacon Station No. 685
9301 Greenback Lane
Orangevale, California

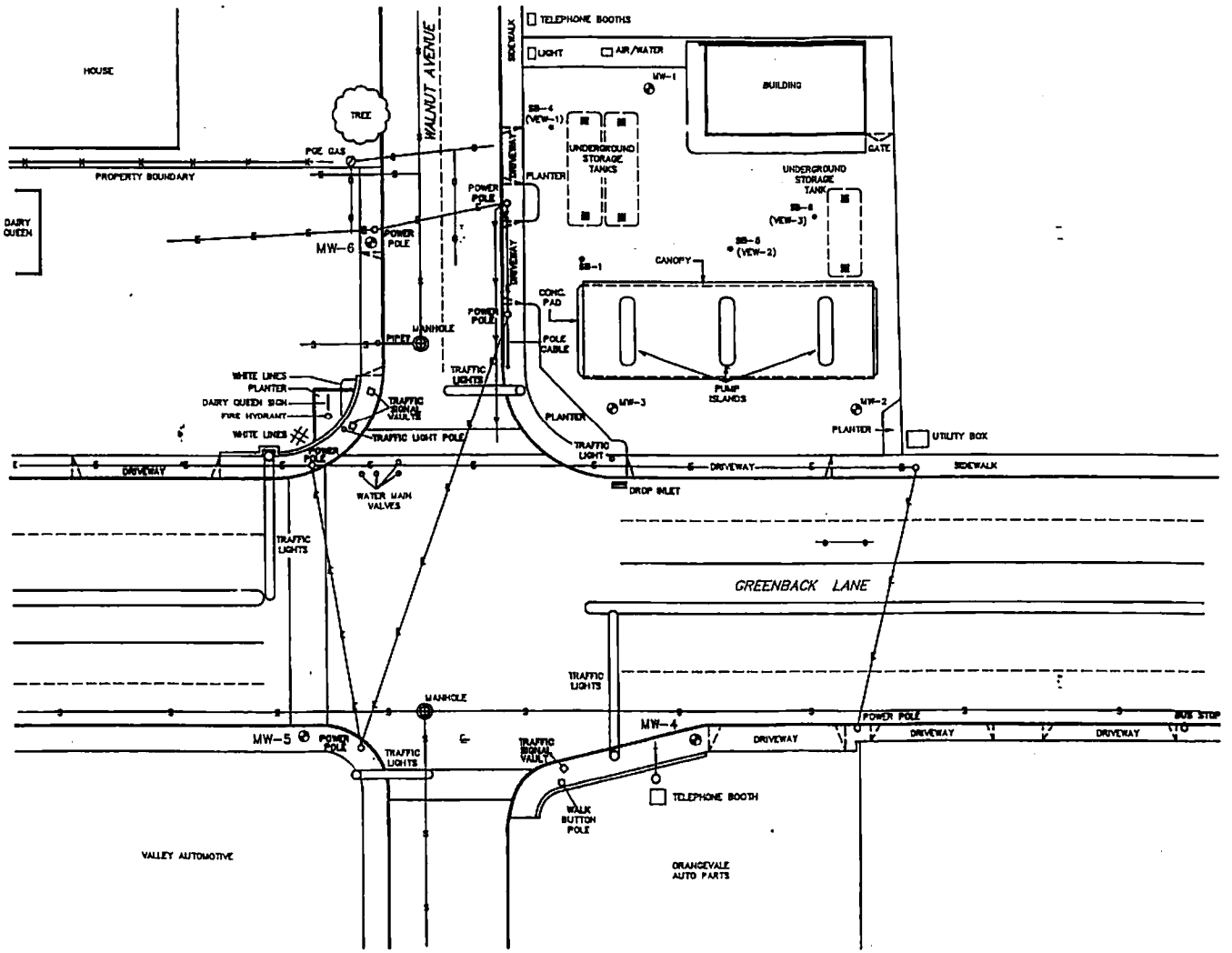
Sample ID	Depth (ft)	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH as gasoline (mg/kg)	MTBE (mg/kg)
HP-1	15	04/29/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	25	04/29/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	34.5	04/29/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	44	04/29/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	49	04/29/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
HP-2	15	04/30/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	25	04/30/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	35	04/30/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	40	04/30/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050
	45	04/30/97	<0.005	<0.005	<0.005	<0.005	<1.0	<0.050

TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.

BE081282

APPENDIX D

GEOLOGIC CROSS SECTIONS
(DELTA, 1995)



North

LEGEND:

- S — SEWER LINE (BURIED)
- E — ELECTRICAL (OVERHEAD)
- V — ELECTRICAL (BURIED)
- G — GAS (BURIED)
- T — TELEPHONE (BURIED)
- FENCE
- • SB-1 SOIL BORING LOCATION
- ⊕ MW-1 MONITORING WELL LOCATION

NOTE:

SB-1 DRILLED BY DAMES AND MOORE IN MAY 1988.

0 30 FT

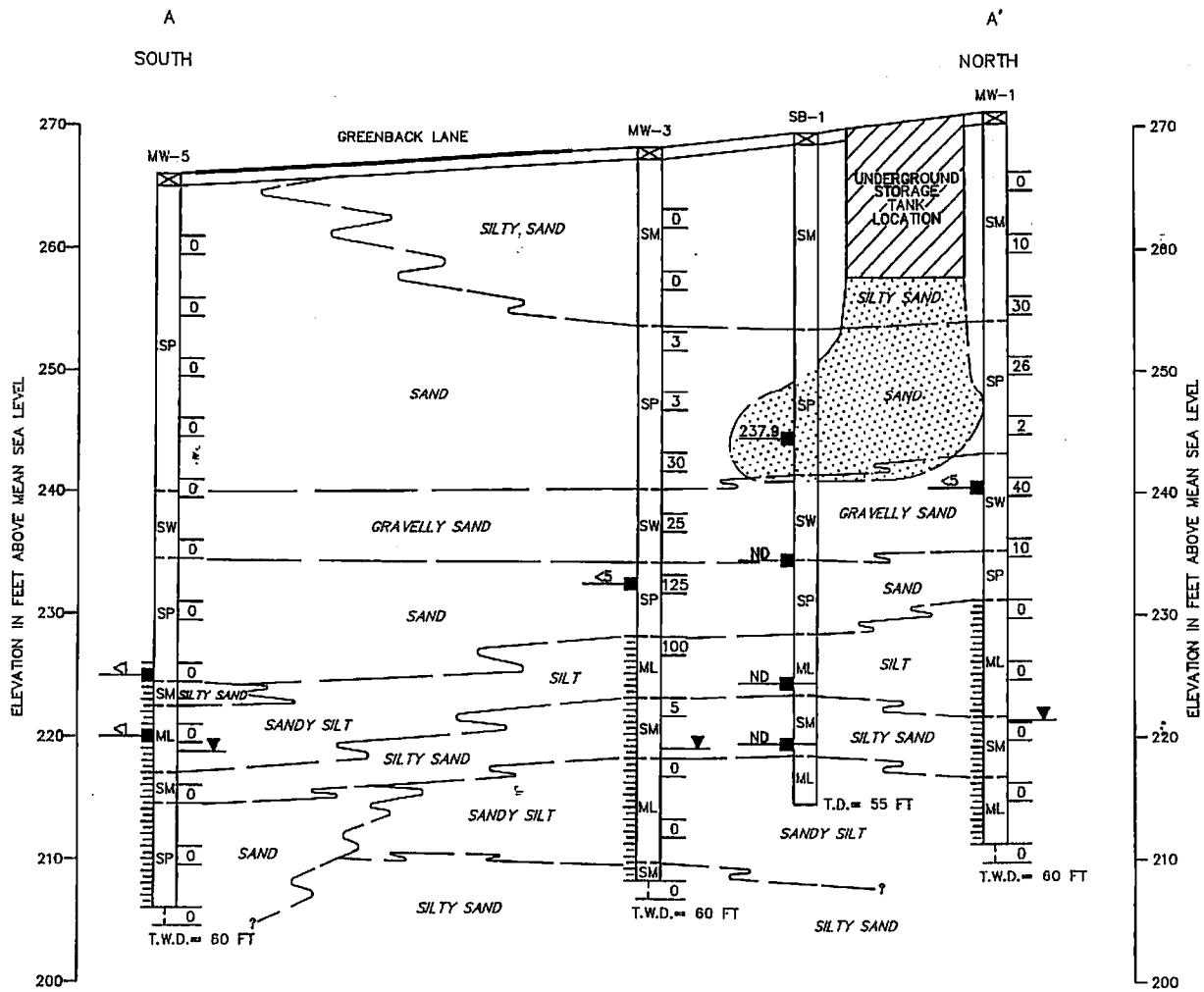
SCALE

B8028879

FIGURE 2
SITE MAP
BEACON STATION NO 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 40-89-064	DRAWN BY SSG 4/5/90
FILE NO. 89-064-3	PREPARED BY GKA 2/28/90
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

- SM — ASPHALT AND AGGREGATE BASE
- SM — U.S.C.S. SYMBOL
- APPROXIMATE CONTACT BETWEEN SOIL TYPES
- 0 — VAPOR SENSOR READING IN PARTS PER MILLION
- SAMPLE SUBMITTED FOR CHEMICAL ANALYSIS
- <5 — TOTAL PETROLEUM HYDROCARBONS IN PARTS PER MILLION
- WATER LEVEL – 3/12/90
- SCREENED INTERVAL
- TWD — TOTAL WELL DEPTH
- ND — NOT DETECTED
- INFERRED DISTRIBUTION OF SOILS CONTAINING TPHg >100 ppm

NOTE:
SB-1 DRILLED AND LOGGED ON 5/17/88 BY DAMES AND MOORE

10 FT
0
VERTICAL SCALE

0 30 FT
HORIZONTAL SCALE

BS028881

FIGURE 4
GEOLOGIC CROSS SECTION A – A'
BEACON STATION NO 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 40-89-064	DRAWN BY I.H. 3/21/90
FILE NO. 89-064-4	PREPARED BY CKA 3/21/90
REVISION NO. 2	REVIEWED BY

Delta Environmental Consultants, Inc.

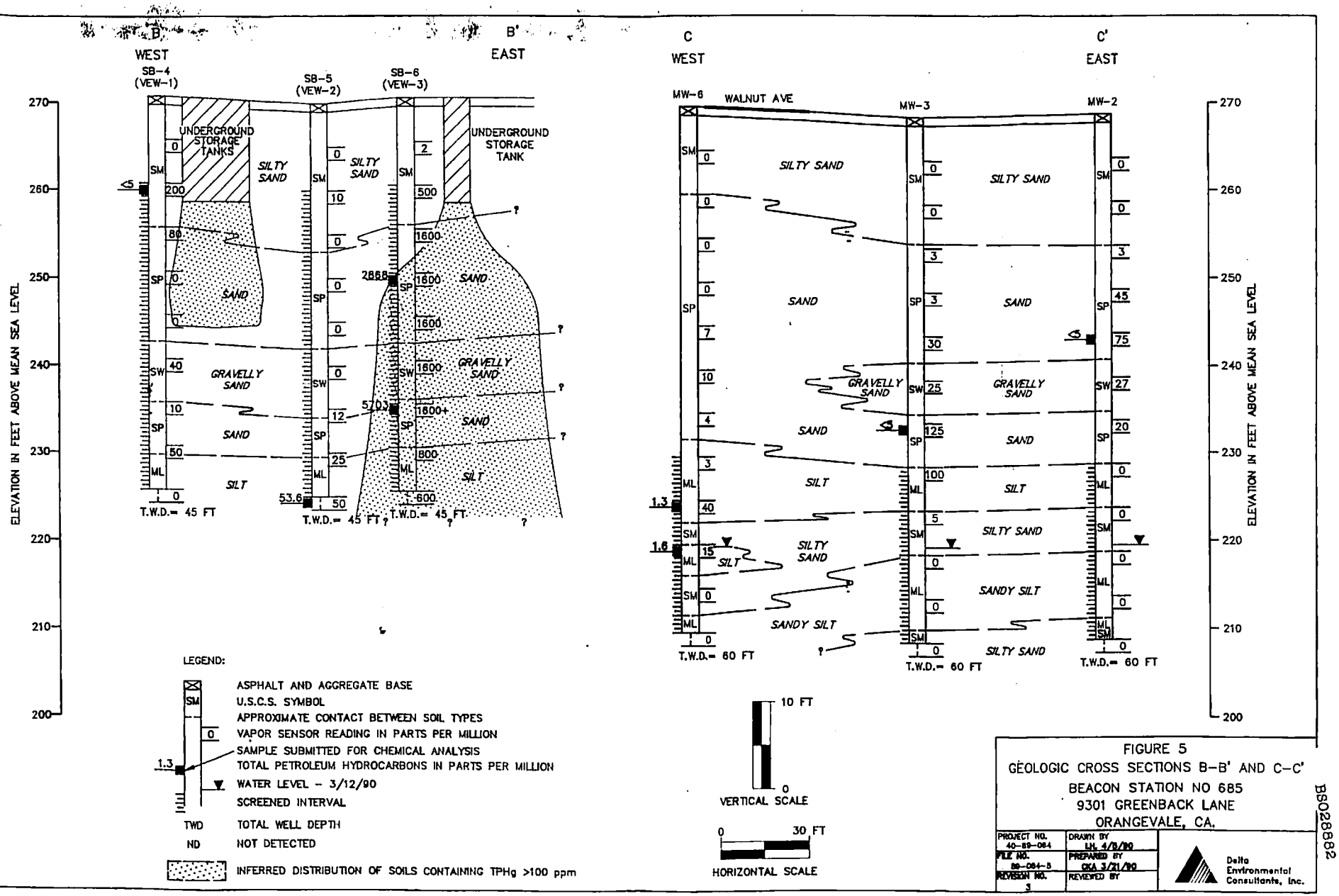


FIGURE 5
GEOLOGIC CROSS SECTIONS B-B' AND C-C'
BEACON STATION NO 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 40-89-084	DRAWN BY LH 4/3/90
FILE NO. 89-084-5	PREPARED BY CKA 3/21/90
REVISION NO. 3	REVIEWED BY

Delta Environmental Consultants, Inc.

BS028882

APPENDIX E

SUMMARY OF HISTORICAL GROUNDWATER LEVEL MEASUREMENTS AND SELECTED GROUNDWATER ELEVATION CONTOUR MAPS (RDM, 2003; DELTA, 1995)

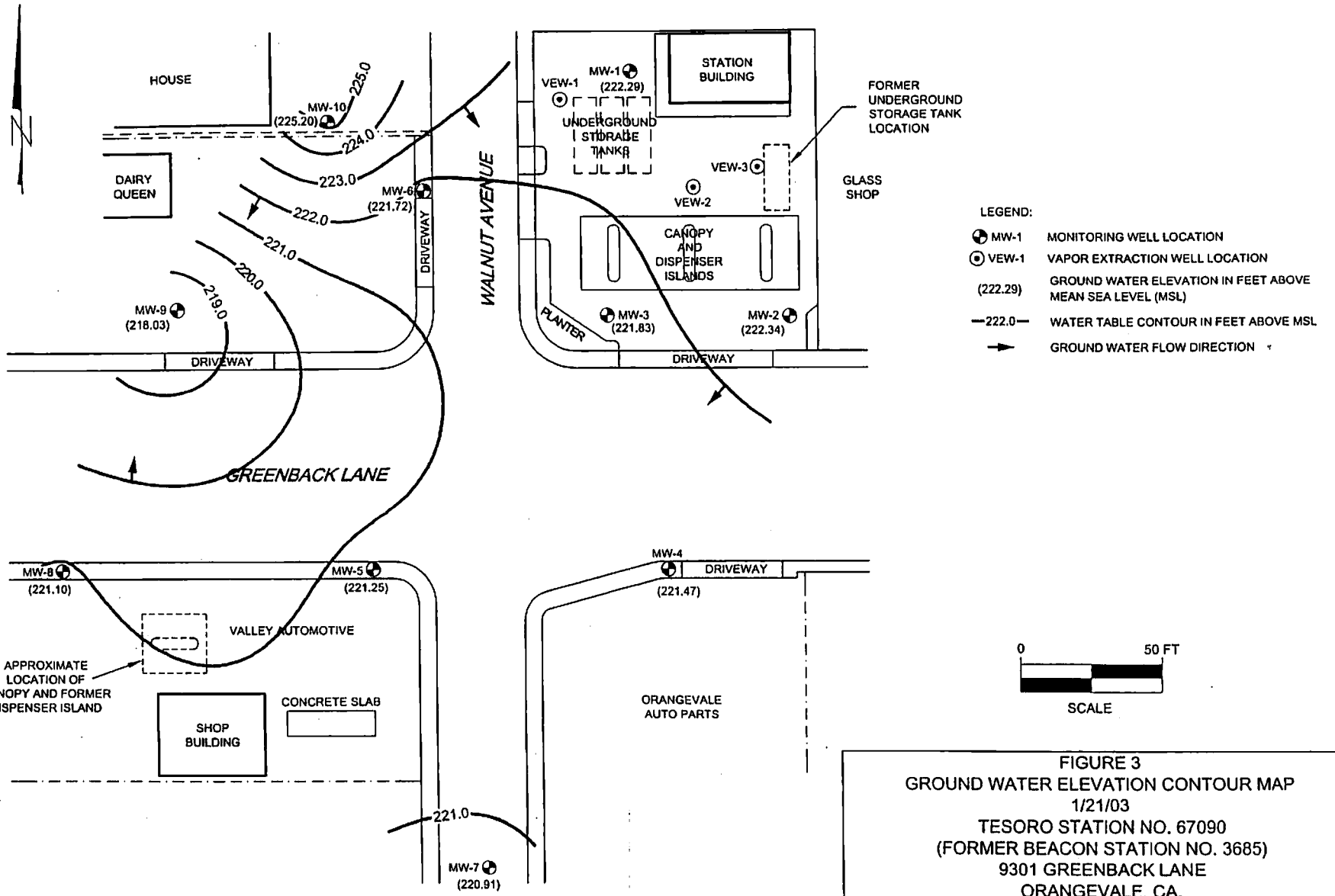
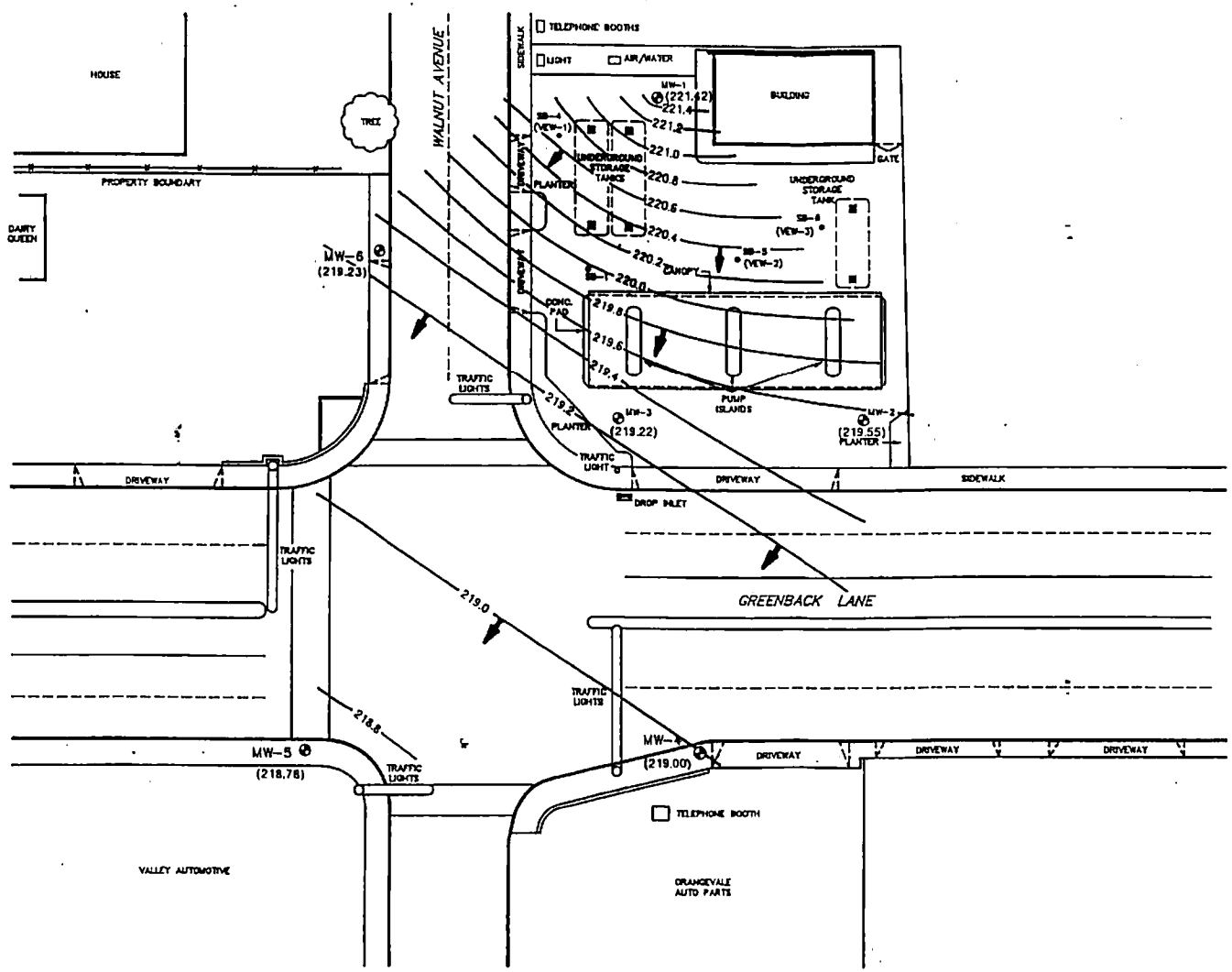


FIGURE 3
GROUND WATER ELEVATION CONTOUR MAP
1/21/03
TESORO STATION NO. 67090
(FORMER BEACON STATION NO. 3685)
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 00-3685	DRAWN BY M.L. 2/5/03
FILE NO. 3685 Site	PREPARED BY RDM
REVISION NO. 1	REVIEWED BY

R D M Environmental



North

LEGEND:

- FENCE
- SB-1 SOIL BORING LOCATION
- MW-1 MONITORING WELL LOCATION
- (221.42) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 219.2 WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL
- GROUND WATER FLOW DIRECTION

NOTE:
SB-1 DRILLED BY DAMES AND MOORE IN MAY 1988.

0 30 FT
SCALE

FIGURE 6
WATER TABLE CONTOUR MAP - 3/12/90
BEACON STATION NO 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 40-89-064	DRAWN BY LH 3/21/90
FILE NO. 89-064-3	PREPARED BY CKA 3/21/90
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

BS028883

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-1	12/17/93	271.03	40 - 60	49.02	222.01	—	
	03/14/94			43.08	227.95	—	
	06/16/94			40.56	230.47	—	
	08/30/94			44.49	226.54	59.01	
	11/04/94			48.42	222.61	59.00	
	01/20/95			47.63	223.40	58.98	
	06/13/95			42.76	228.27	59.00	
	09/28/95			43.02	228.01	59.03	
	12/30/95			44.49	226.54	59.03	
	03/26/96			43.31	227.72	59.02	
	05/18/96			43.48	227.55	59.05	
	09/26/96			43.90	227.13	58.98	
	12/06/96			44.01	227.02	58.96	
	03/26/97			41.58	229.45	58.97	
	06/30/97			43.07	227.96	58.97	
	09/04/97			43.92	227.11	58.97	
	12/29/97			47.60	223.43	58.97	
	03/28/98			41.21	229.82	58.98	
	06/11/98			40.90	230.13	58.96	
	08/27/98			42.07	228.96	58.98	
	12/04/98			43.80	227.23	58.96	
	03/03/99			44.14	226.89	58.97	
	05/18/99			43.99	227.04	58.98	
	08/18/99			45.80	225.23	58.43	
	11/02/99			47.35	223.68	58.43	
	02/02/00			48.48	222.55	58.43	
	05/11/00			45.68	225.35	58.42	
	09/05/00			45.97	225.06	58.42	
	10/27/00			46.81	224.22	58.42	
	01/29/01			48.30	222.73	58.43	
	04/17/01			48.21	222.82	58.43	
	08/16/01			49.04	221.99	58.43	
	10/15/01			49.39	221.64	58.43	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-2	12/17/93	268.07	40 - 60	47.50	220.57	—	
	03/14/94			47.30	220.77	—	
	06/16/94			47.90	220.17	—	
	08/30/94			48.92	219.15	58.75	
	11/04/94			49.56	218.51	58.90	
	01/20/95			48.51	219.56	58.71	
	06/13/95			43.04	225.03	58.76	
	09/28/95			43.33	224.74	58.74	
	12/30/95			44.38	223.69	58.72	
	03/26/96			43.18	224.89	58.71	
	05/18/96			43.15	224.92	59.02	
	09/26/96			43.73	224.34	59.04	
	12/06/96			44.01	224.06	59.04	
	03/26/97			41.34	226.73	59.03	
	06/30/97			42.56	225.51	59.02	
	09/04/97			42.94	225.13	59.01	
	12/29/97			43.47	224.60	59.01	
	03/28/98			39.98	228.09	59.01	
	06/11/98			39.76	228.31	59.02	
	08/27/98			40.68	227.39	59.01	
	12/04/98			42.15	225.92	59.02	
	03/03/99			42.16	225.91	59.02	
	05/18/99			42.50	225.57	59.01	
	08/18/99			43.13	224.94	59.01	
	11/02/99			43.79	224.28	59.01	
	02/02/00			44.61	223.46	59.01	
	05/11/00			42.35	225.72	59.01	
	09/05/00			42.87	225.20	59.01	
	10/27/00			43.15	224.92	59.01	
	01/29/01			45.20	222.87	59.02	
	04/17/01			45.10	222.97	59.01	
	08/16/01			45.38	222.69	59.01	
	10/15/01			45.71	222.36	59.01	

NOTES.
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-3	12/17/93	267.06	40 - 60	50.95	216.11	—	
	03/14/94			46.72	220.34	—	
	06/16/94			51.14	215.92	—	
	08/30/94			49.43	217.63	53.75	
	11/04/94			50.17	216.89	53.75	
	01/20/95			49.20	217.86	53.73	
	06/13/95			43.28	223.78	56.90	
	09/28/95			43.46	223.60	56.92	
	12/30/95			44.55	222.51	56.75	
	03/26/96			43.34	223.72	56.75	
	05/18/96			43.47	223.59	56.75	
	09/26/96			44.00	223.06	56.68	
	12/06/96			44.78	222.28	56.71	
	03/26/97			41.84	225.22	56.73	
	06/30/97			42.84	224.22	56.74	
	09/04/97			43.02	224.04	56.73	
	12/29/97			44.03	223.03	56.73	
	03/28/98			40.11	226.95	56.74	
	06/11/98			39.95	227.11	56.73	
	08/27/98			40.69	226.37	56.74	
	12/04/98			42.13	224.93	56.73	
	03/03/99			42.09	224.97	56.74	
	05/18/99			42.55	224.51	56.73	
	08/18/99			43.11	223.95	56.74	
	11/02/99			43.74	223.32	56.73	
	02/02/00			44.59	222.47	56.74	
	05/11/00			42.71	224.35	56.74	
	09/05/00			43.14	223.92	56.74	
	10/27/00			43.69	223.37	56.74	
	01/29/01			45.07	221.99	56.74	
	04/17/01			44.91	222.15	56.74	
	08/16/01			45.43	221.63	56.74	
	10/15/01			45.79	221.27	56.74	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-4	12/17/93	267.81	40 - 60	49.30	218.51	—	
	03/14/94			49.09	218.72	—	
	06/16/94			49.93	217.88	—	
	08/30/94			49.85	217.96	59.75	
	11/04/94			50.18	217.63	59.73	
	01/20/95			49.66	218.15	59.74	
	06/13/95			44.49	223.32	59.75	
	09/28/95			44.75	223.06	59.74	
	12/30/95			45.73	222.08	59.72	
	03/26/96			44.55	223.26	59.71	
	05/18/96			44.42	223.39	59.97	
	09/26/96			44.90	222.91	59.87	
	12/06/96			45.51	222.30	59.89	
	03/26/97			42.77	225.04	59.87	
	06/30/97			43.85	223.96	59.89	
	09/04/97			44.12	223.69	59.90	
	12/29/97			45.04	222.77	59.90	
	03/28/98			41.12	226.69	59.91	
	06/11/98			41.24	226.57	59.92	
	08/27/98			41.78	226.03	59.93	
	12/04/98			43.14	224.67	59.94	
	03/03/99			43.22	224.59	59.94	
	05/18/99			43.61	224.20	59.95	
	08/18/99			44.15	223.66	59.94	
	11/02/99			44.75	223.06	59.94	
	02/02/00			45.61	222.20	59.93	
	05/11/00			42.22	225.59	59.93	
	09/05/00			44.31	223.50	59.94	
	10/27/00			44.75	223.06	59.94	
	01/29/01			45.16	222.65	59.92	
	04/17/01			45.05	222.76	59.91	
	08/16/01			46.48	221.33	59.90	
	10/15/01			46.87	220.94	59.90	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-5	12/17/93	265.77	40 - 60	47.42	218.35	—	
	03/14/94			47.22	218.55	—	
	06/16/94			48.03	217.74	—	
	08/30/94			47.99	217.78	59.13	
	11/04/94			48.33	217.44	58.14	
	01/20/95			47.76	218.01	59.12	
	06/13/95			42.59	223.18	59.13	
	09/28/95			42.89	222.88	59.10	
	12/30/95			43.89	221.88	59.11	
	03/26/96			42.68	223.09	59.12	
	05/18/96			42.68	223.09	58.34	
	09/26/96			43.16	222.61	58.22	
	12/06/96			43.72	222.05	58.25	
	03/26/97			40.97	224.80	58.20	
	06/30/97			41.96	223.81	58.21	
	09/04/97			42.37	223.40	58.20	
	12/29/97			43.30	222.47	58.20	
	03/28/98			39.56	226.21	58.21	
	06/11/98			39.48	226.29	58.20	
	08/27/98			40.18	225.59	58.21	
	12/04/98			41.55	224.22	58.20	
	03/03/99			41.51	224.26	58.20	
	05/18/99			42.01.	223.76	58.20	
	08/18/99			42.46	223.31	58.21	
	11/02/99			43.06	222.71	58.20	
	02/02/00			43.88	221.89	58.20	
	05/11/00			43.81	221.96	58.20	
	09/05/00			42.54	223.23	58.20	
	10/27/00			43.12	222.65	58.20	
	01/29/01			44.42	221.35	58.21	
	04/17/01			44.80	220.97	58.21	
	08/16/01			44.81	220.96	58.21	
	10/15/01			45.15	220.62	58.21	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-6	12/17/93	269.25	40 - 60	50.46	218.79	—	
	03/14/94			50.19	219.06	—	
	06/16/94			51.10	218.15	—	
	08/30/94			51.01	218.24	58.77	
	11/04/94			51.36	217.89	58.75	
	01/20/95			50.78	218.47	58.73	
	06/13/95			45.43	223.82	58.73	
	09/28/95			45.79	223.46	58.72	
	12/30/95			46.84	222.41	58.75	
	03/26/96			45.58	223.67	58.71	
	05/18/96			45.59	223.66	58.84	
	09/26/96			46.11	223.14	58.75	
	12/06/96			46.60	222.65	58.76	
	03/26/97			43.79	225.46	58.78	
	06/30/97			44.87	224.38	58.78	
	09/04/97			45.28	223.97	58.79	
	12/29/97			46.24	223.01	58.79	
	03/28/98			42.39	226.86	58.78	
	06/11/98			42.31	226.94	58.77	
	08/27/98			43.03	226.22	58.76	
	12/04/98			44.43	224.82	58.77	
	03/03/99			44.41	224.84	58.78	
	05/18/99			44.95	224.30	58.76	
	08/18/99			45.42	223.83	58.74	
	11/02/99			46.05	223.20	58.74	
	02/02/00			46.91	222.34	58.74	
	05/11/00			45.09	224.16	58.73	
	09/05/00			45.42	223.83	58.72	
	10/27/00			46.08	223.17	58.72	
	01/29/01			47.41	221.84	58.70	
	04/17/01			47.26	221.99	58.70	
	08/16/01			47.80	221.45	58.70	
	10/15/01			48.16	221.09	58.70	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-7	12/17/93	259.69	40 - 60	41.63	218.06	—	
	03/14/94			41.50	218.19	—	
	06/16/94			42.30	217.39	—	
	08/30/94			42.28	217.41	59.18	
	11/04/94			42.60	217.09	59.18	
	01/20/95			42.00	217.69	59.18	
	06/13/95			37.03	222.66	59.20	
	09/28/95			37.29	222.40	59.18	
	12/30/95			38.23	221.46	59.18	
	03/26/96			37.11	222.58	59.20	
	05/18/96			37.08	222.61	59.33	
	09/26/96			37.51	222.18	59.34	
	12/06/96			38.11	221.58	59.34	
	03/26/97			35.41	224.28	59.33	
	06/30/97			36.31	223.38	59.36	
	09/04/97			36.71	222.98	59.37	
	12/29/97			37.62	222.07	59.37	
	03/28/98			33.99	225.70	59.38	
	06/11/98			33.89	225.80	59.39	
	08/27/98			34.56	225.13	59.40	
	12/04/98			35.93	223.76	59.43	
	03/03/99			35.90	223.79	59.45	
	05/18/99			36.35	223.34	59.44	
	08/18/99			36.76	222.93	59.44	
	11/02/99			37.35	222.34	59.45	
	02/02/00			38.11	221.58	59.45	
	05/11/00			36.61	223.08	59.45	
	09/05/00			37.03	222.66	59.45	
	10/27/00			37.45	222.24	59.45	
	01/29/01			36.64	223.05	59.45	
	04/17/01			36.51	223.18	59.46	
	08/16/01			39.11	220.58	59.46	
	10/15/01			39.36	220.33	59.46	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-8	12/17/93	264.04	40 - 60	45.84	218.20	—	
	03/14/94			45.71	218.33	—	
	06/16/94			46.54	217.50	—	
	08/30/94			46.49	217.55	58.62	
	11/04/94			46.81	217.23	59.34	
	01/20/95			46.14	217.90	58.61	
	06/13/95			40.98	223.06	58.65	
	09/28/95			41.34	222.70	58.65	
	12/30/95			42.37	221.67	58.65	
	03/26/96			41.11	222.93	58.66	
	05/18/96			41.11	222.93	59.31	
	09/26/96			41.63	222.41	59.30	
	12/06/96			42.23	221.81	59.33	
	03/26/97			39.44	224.60	59.31	
	06/30/97			40.45	223.59	59.34	
	09/04/97			40.87	223.17	59.30	
	12/29/97			41.74	222.30	59.30	
	03/28/98			38.01	226.03	59.31	
	06/11/98			37.98	226.06	59.31	
	08/27/98			38.72	225.32	59.32	
	12/04/98			40.02	224.02	59.30	
	03/03/99			39.99	224.05	59.29	
	05/18/99			40.53	223.51	59.28	
	08/18/99			40.99	223.05	59.28	
	11/02/99			41.55	222.49	59.27	
	02/02/00			42.37	221.67	59.27	
	05/11/00			40.65	223.39	59.27	
	09/05/00			40.98	223.06	59.28	
	10/27/00			41.63	222.41	59.28	
	01/29/01			40.61	223.43	59.28	
	04/17/01			40.46	223.58	59.28	
	08/16/01			43.30	220.74	59.27	
	10/15/01			43.63	220.41	59.27	
MW-9	05/18/99	265.07	38 - 53	44.36	220.71	—	
	08/18/99			44.89	220.18	53.93	
	11/02/99			45.58	219.49	53.92	
	02/02/00			46.47	218.60	53.91	
	05/11/00			44.45	220.62	53.91	
	09/05/00			44.90	220.17	53.91	
	10/27/00			42.22	222.85	53.91	
	01/29/01			46.96	218.11	53.90	
	04/17/01			46.80	218.27	53.90	
	08/16/01			47.31	217.76	53.90	
	10/15/01			47.70	217.37	53.90	

NOTES:
1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
— = Not measured/not observed.
Well Depth = Measurement from top of casing to bottom of well.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Screened Interval (feet below grade)	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-10	05/18/99	268.74	39 - 54	41.12	227.62	—	
	08/18/99			41.58	227.16	53.91	
	11/02/99			42.19	226.55	53.90	
	02/02/00			43.03	225.71	53.90	
	05/11/00			41.22	227.52	53.90	
	09/05/00			41.60	227.14	53.90	
	10/27/00			45.60	223.14	53.90	
	01/29/01			43.55	225.19	53.89	
	04/17/01			43.41	225.33	53.87	
	08/16/01			43.94	224.80	53.87	
	10/15/01			44.28	224.46	53.87	

NOTES:
MTBE[1] = Methyl-tertiary-butyl-ether.
DIPE[2] = Diisopropyl ether.
1,2-DCA[3] = 1,2-Dichloroethane.
11/02/99[4] = Duplicate Sample.
< = Below indicated detection limit
— = Not analyzed.
* = External standardization was used due to matrix interference.
~ = Product was not typical gasoline.
08/24/00[5] = Well Not Sampled on This Date

TABLE I

GROUND WATER MONITORING DATA

Tesoro Station No 67090
(Former Beacon Station No. 3685)
9301 Greenback Lane
Orangevale, California

Monitoring Well	Date	Reference Elevation (ft)[a]	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-1	05/02/02	273.00	49.14	223.86	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		49.53	223.47	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		50.71	222.29	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
MW-2	05/02/02	269.64	45.73	223.91	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		46.06	223.58	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		47.30	222.34	<0.5	<0.5	<0.5	<0.5	<50	<0.5	64[d], 24[c]	
MW-3	05/02/02	269.03	45.64	223.39	0.94	<0.5	<0.5	<0.5	52	6.9	2.8[b]	
	06/13/02		46.01	223.02	1.4	<0.5	<0.5	<0.5	<50	3.8	1.6[b]	
	01/21/03		47.20	221.83	13	2.7	0.62	4.1	280	5.9	1.9[b]	
MW-4	05/02/02	269.79	46.85	222.94	<0.5	<0.5	<0.5	<0.5	<50	<0.5	0.58[b]	
	06/13/02		47.20	222.59	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		48.32	221.47	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
MW-5	05/02/02	267.73	45.01	222.72	<0.5	<0.5	<0.5	<0.5	<50	1.5	11[b]	
	06/13/02		45.39	222.34	<0.5	<0.5	<0.5	<0.5	<50	2.6	6.7[b]	
	01/21/03		46.48	221.25	<0.5	<0.5	<0.5	<0.5	<50	2.5	7.7[b]	
MW-6	05/02/02	271.25	48.01	223.24	0.51	<0.5	<0.5	<0.5	100	13	5.3[c], 1.9[b]	
	06/13/02		48.39	222.86	0.66	<0.5	<0.5	<0.5	120	11	1.5[b]	
	01/21/03		49.53	221.72	<0.5	<0.5	<0.5	<0.5	<50	3.0	ND	
MW-7	05/02/02	261.66	39.30	222.36	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		39.71	221.95	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		40.75	220.91	<0.5	<0.5	<0.5	<0.5	<50	<0.5	0.63[b]	
MW-8	05/02/02	266.02	43.47	222.55	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		46.83	219.19	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		44.92	221.10	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
MW-9	05/02/02	267.07	47.52	219.55	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		47.90	219.17	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	01/21/03		49.04	218.03	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	

TABLE 1

GROUND WATER MONITORING DATA

Tesoro Station No 67090
(Former Beacon Station No. 3685)
9301 Greenback Lane
Orangevale, California

Monitoring Well	Date	Reference Elevation (ft)[a]	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-10	05/02/02	270.80	44.13	226.67	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		44.50	226.30	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	01/21/03		45.60	225.20	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	

a = Elevations referenced to mean sea level
b = 1,2-dichloroethane
c = tert butanol
d = methanol
e = ethanol
TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.
NA = Not analyzed
ND = Not detected at or above the laboratory reporting limit,.
NS = Not sampled
µg/L = Micrograms per liter.
Oxygenates = diisopropyl ether, ethyl-t-butyl ether, tert-amyl methyl ether, tert-butanol

APPENDIX F

SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS (RDM, 2003; DELTA, 1990)

TABLE 1

GROUND WATER MONITORING DATA

Tesoro Station No 67090
(Former Beacon Station No. 3685)
9301 Greenback Lane
Orangevale, California

Monitoring Well	Date	Reference Elevation (ft)[a]	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-1	05/02/02	273.00	49.14	223.86	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		49.53	223.47	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		50.71	222.29	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
MW-2	05/02/02	269.64	45.73	223.91	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		46.06	223.58	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		47.30	222.34	<0.5	<0.5	<0.5	<0.5	<50	<0.5	64[d], 24[c]	
MW-3	05/02/02	269.03	45.64	223.39	0.94	<0.5	<0.5	<0.5	52	6.9	2.8[b]	
	06/13/02		46.01	223.02	1.4	<0.5	<0.5	<0.5	<50	3.8	1.6[b]	
	01/21/03		47.20	221.83	13	2.7	0.62	4.1	280	5.9	1.9[b]	
MW-4	05/02/02	269.79	46.85	222.94	<0.5	<0.5	<0.5	<0.5	<50	<0.5	0.58[b]	
	06/13/02		47.20	222.59	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		48.32	221.47	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
MW-5	05/02/02	267.73	45.01	222.72	<0.5	<0.5	<0.5	<0.5	<50	1.5	11[b]	
	06/13/02		45.39	222.34	<0.5	<0.5	<0.5	<0.5	<50	2.6	6.7[b]	
	01/21/03		46.48	221.25	<0.5	<0.5	<0.5	<0.5	<50	2.5	7.7[b]	
MW-6	05/02/02	271.25	48.01	223.24	0.51	<0.5	<0.5	<0.5	100	13	5.3[c], 1.9[b]	
	06/13/02		48.39	222.86	0.66	<0.5	<0.5	<0.5	120	11	1.5[b]	
	01/21/03		49.53	221.72	<0.5	<0.5	<0.5	<0.5	<50	3.0	ND	
MW-7	05/02/02	261.66	39.30	222.36	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		39.71	221.95	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		40.75	220.91	<0.5	<0.5	<0.5	<0.5	<50	<0.5	0.63[b]	
MW-8	05/02/02	266.02	43.47	222.55	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		46.83	219.19	NS	NS	NS	NS	NS	NS	NS	
	01/21/03		44.92	221.10	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
MW-9	05/02/02	267.07	47.52	219.55	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		47.90	219.17	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	01/21/03		49.04	218.03	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	

TABLE 1

GROUND WATER MONITORING DATA

Tesoro Station No 67090
(Former Beacon Station No. 3685)
9301 Greenback Lane
Orangevale, California

Monitoring Well	Date	Reference Elevation (ft)[a]	Depth to Ground Water (ft)	Ground Water Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)	Oxygenates (µg/L)	Comments
MW-10	05/02/02	270.80	44.13	226.67	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	06/13/02		44.50	226.30	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	
	01/21/03		45.60	225.20	<0.5	<0.5	<0.5	<0.5	<50	<0.5	ND	

a = Elevations referenced to mean sea level
b = 1,2-dichloroethane
c = tert butanol
d = methanol
e = ethanol
TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.
NA = Not analyzed
ND = Not detected at or above the laboratory reporting limit.
NS = Not sampled
µg/L = Micrograms per liter.
Oxygenates = diisopropyl ether, ethyl-t-butyl ether, tert-amyl methyl ether, tert-butanol

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[2]
MW-1	12/17/93	<50	<0.5	<0.5	<0.5	<0.5					
	03/14/94	<50	<0.5	<0.5	<0.5	2.3					
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5					
	08/30/94	<50	<0.5	<0.5	<0.5	<0.5					
	11/04/94	<50	<0.5	<0.5	<0.5	<0.5					
	01/20/95	<50	<0.5	<0.5	<0.5	<0.5					
	06/13/95	<50	<0.5	<0.5	<0.5	<0.5					
	09/28/95	270**	<0.50	<0.50	<0.50	<0.50					
	12/30/95	<50	<0.50	<0.50	<0.50	<0.50					
	03/26/96	<50	<0.50	<0.50	<0.50	<0.50					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/26/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/04/97	<50	<0.50	<0.50	<0.50	<0.50	7.4				
	12/29/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/28/98	<50	<0.50	<0.50	<0.50	<0.50	4.2				
	06/11/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	
	08/27/98	<50	<0.50	<0.50	<0.50	<0.50	2.0	<5.0	<0.5*	<50	
	12/04/98	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	0.98	<5.0	<0.5*	<50	<0.50
	02/02/00	<50	<0.50	0.64	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	0.56	<0.50	1.8	1.7	<5.0	<0.5*	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	0.50	<5.0	<0.5*	<50	<0.50
	09/05/00[3]										
	10/27/00[3]										
	01/23/01[3]										
	04/17/01[3]										
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	0.61	<5.0	<0.5*	<50	<0.50
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	0.53	<5.0	<0.5*	<50	<0.50

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- * = External standardization was used due to matrix interference.
- ** = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[3]
MW-2	12/17/93	71	<0.5	<0.5	<0.5	<0.5					
	03/14/94	<50	<0.5	<0.5	<0.5	<0.5					
	06/16/94	<50	<0.5	<0.5	<0.5	1.3					
	08/30/94	<50	<0.5	<0.5	<0.5	<0.5					
	11/04/94	<50	<0.5	<0.5	<0.5	<0.5					
	01/20/95	<50	<0.5	<0.5	<0.5	<0.5					
	06/13/95	<50	<0.5	<0.5	<0.5	<0.5					
	09/28/95	55	<0.50	<0.50	<0.50	<0.50					
	12/30/95	<50	<0.50	<0.50	<0.50	<0.50					
	03/26/96	<50	<0.50	<0.50	<0.50	<0.50					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/26/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/04/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/29/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/28/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50				
	06/11/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	
	08/27/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	
	12/04/98	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	02/02/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	0.55	<5.0	<0.5	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	09/05/00[5]										
	10/27/00[5]										
	01/23/01[5]										
	04/17/01[5]										
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- • = External standardization was used due to matrix interference.
- ** = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[3]
MW-3	12/17/93	5,900	2,000	460	76	420					
	03/14/94	1,900	740	110	23	150					
	06/16/94	86	2.1	<0.5	<0.5	2.2					
	08/30/94	52	4.8	1.3	<0.5	1.8					
	11/04/94	80	11	3.7	0.51	4.5					
	01/20/95	120	13	5.3	1.0	8.9					
	06/13/95	3,400	500	350	73	420					
	09/28/95	840	40	6.0	31	97					
	12/30/95	6,200	410	98	170	570					
	03/26/96	8,000	610	140	170	560					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/26/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/04/97	<50	0.57	<0.50	<0.50	<0.50	<5.0				
	12/29/97	140	0.57	<0.50	<0.50	0.61	8.8				
	03/28/98	370	170	1.4	<0.50	3.9	5.0				
	06/11/98	510	62	2.7	<0.50	13	16	32	<0.5	<50	
	08/27/98	760	150	7.7	4.0	35	20	91	0.7	71	
	12/04/98	<50	0.65	<0.50	<0.50	0.62	14				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	7.4				
	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	7.1				
	08/18/99	73	<0.50	<0.50	<0.50	<0.50	9.4				
	11/02/99	91	<0.50	<0.50	<0.50	<0.50	10	5.1	<0.5	<50	2.0
	02/02/00	210	<0.50	<0.50	<0.50	<0.50	5.2				
	02/22/00	120	<0.50	<0.50	<0.50	<0.50	5.9	5.9	<0.5	<50	
	05/11/00	180	7.2	2.3	<0.50	2.1	9.4	7.3	<0.5	<50	3.1
	09/05/00	65	3.7	<0.50	<0.50	<0.50	8.1	7.3	<0.5		2.4
	10/27/00	220	0.99	<0.50	<0.50	0.68	4.9	<5.0	<0.5	<50	1.2
	01/23/01	170	0.92	<0.50	<0.50	<0.50	3.6	<5.0	<0.5	<50	1.4
	04/17/01	61	<0.50	<0.50	<0.50	<0.50	7.4	<5.0	<0.5	<50	2.3
	08/16/01	<50	0.86	<0.50	<0.50	<0.50	6.7	<5.0	<0.5	<50	2.2
	10/15/01	82	<0.50	<0.50	<0.50	<0.50	4.4	<5.0	<0.5	<50	1.4

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- • = External standardization was used due to matrix interference.
- ** = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[2]
MW-4	12/17/93	<50	<0.5	<0.5	<0.5	<0.5					
	03/14/94	<50	<0.5	<0.5	<0.5	<0.5					
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5					
	08/30/94	<50	<0.5	<0.5	<0.5	<0.5					
	11/04/94	<50	<0.5	<0.5	<0.5	<0.5					
	01/20/95	<50	<0.5	<0.5	<0.5	<0.5					
	06/13/95	<50	<0.5	<0.5	<0.5	<0.5					
	09/28/95	<50	<0.50	<0.50	<0.50	<0.50					
	12/30/95	<50	<0.50	<0.50	<0.50	<0.50					
	03/26/96	<50	<0.50	<0.50	<0.50•	<0.50					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	7.4				
	09/26/96	<50	<0.50	<0.50	<0.50	<0.50	8.7				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	7.1				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	12				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/04/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/29/97	1,800	130	<0.50	240	22	71				
	03/28/98	<50	<0.50	<0.50	<0.50	<0.50	3.8				
	06/11/98	<50	<0.50	<0.50	<0.50	<0.50	0.52	<5.0	<0.5•	<50	
	08/27/98	<50	<0.50	<0.50	<0.50	<0.50	0.56	<5.0	<0.5•	<50	
	12/04/98	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	1.4	<5.0	<0.5•	<50	3.0
	02/02/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	2.6	<5.0	<0.5•	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	2.5	<5.0	<0.5•	<50	4.9
	09/05/00[3]										
	10/27/00[3]										
	01/23/01[3]										
	04/17/01[3]										
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	1.6
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	0.75	<5.0	<0.5•	<50	1.2

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- • = External standardization was used due to matrix interference.
- •• = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[2]
MW-5	12/17/93	870	10	<0.5	<0.5	7.5					
	03/14/94	1,200	9.3	<0.5	<0.5	11					
	06/16/94	1,600	5.1	<1.3	<1.3	<1.3					
	08/30/94	1,500	5.3	<0.5	<0.5	<0.5					
	11/04/94	2,600	6.7	<1.3	<1.3	<1.3					
	01/20/95	1,100	4.0	<1.3	<1.3	<1.3					
	06/13/95	<50	0.72*	0.76*	<0.5	1.5*					
	09/28/95	<50	<0.50	<0.50	<0.50	<0.50					
	12/30/95	<50	<0.50	<0.50	<0.50	<0.50					
	03/26/96	<50	<0.50	<0.50	<0.50	<0.50					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	25				
	09/26/96	66	<0.50	<0.50	<0.50	<0.50	73				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	87				
	09/04/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/29/97	<50	<0.50	<0.50	<0.50	<0.50	13				
	03/28/98	<50	<0.50	<0.50	<0.50	<0.50	1.3				
	06/11/98	<50	<0.50	<0.50	<0.50	<0.50	1.7	<5.0	<0.5	<50	
	08/27/98	<50	<0.50	<0.50	<0.50	<0.50	1.3	<5.0	<0.5	<50	
	12/04/98	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	05/18/99	62	<0.50	<0.50	<0.50	<0.50	40				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	02/02/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	9.3	<5.0	<0.5	<50	11
	09/05/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.5		<0.50
	10/27/00	<50	<0.50	<0.50	<0.50	<0.50	3.7	<5.0	<0.5	<50	6.9
	01/23/01	<50	<0.50	<0.50	<0.50	<0.50	8.8	<5.0	<0.5	<50	9.8
	04/17/01	<50	<0.50	<0.50	<0.50	<0.50	6.6	<5.0	<0.5	<50	7.1
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	3.6	<5.0	<0.5	<50	11
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	5.9	<5.0	<0.5	<50	9.5

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- * = External standardization was used due to matrix interference.
- ~ = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[3]
MW-6	12/17/93	71	<0.5	<0.5	<0.5	<0.5					
	03/14/94	<50	<0.5	<0.5	<0.5	<0.5					
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5					
	08/30/94	<50	<0.5	<0.5	<0.5	<0.5					
	11/04/94	<50	<0.5	<0.5	<0.5	<0.5					
	01/20/95	<50	<0.5	<0.5	<0.5	<0.5					
	06/13/95	860	11	16	2.2	110					
	09/28/95	6,300	310	360	200	940					
	12/30/95	210	0.63	<0.50	<0.50	<0.50					
	03/26/96	170	0.93	0.54	0.78	1.7					
	05/18/96	850	59	13	19	57	58				
	09/26/96	580	36	4.2	7.3	31	38				
	12/06/96	570	29	2.3	2.6	14	44				
	03/26/97	3,800	370	330	130	690	89				
	06/30/97	9,400	540	400	330	1,500	72				
	09/04/97	6,900	400	300	320	1,200	71				
	12/29/97	<50	0.64	0.56	<0.50	2.2	9.7				
	03/28/98	9,200	28	18	290	970	27				
	06/11/98	24,000	71	230	720	2,700	47	25	0.5c	<50	
	08/27/98	17,000	200	410	640	2,400	50	59	0.8[illegible]	110	
	12/04/98	25,000	160	520	880	3,400	<100				
	03/03/99	15,000	140	480	840	3,200	<100				
	05/18/99	4,800	25	60	140	490	<100				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	18				
	11/02/99	63	<0.50	<0.50	<0.50	<0.50	18	10	<0.5	<50	2.0
	11/02/99[4]	77	<0.50	<0.50	<0.50	<0.50	19	11	<0.5	<50	
	02/02/00	<50	1.2	<0.50	<0.50	<0.50	11				
	02/22/00	84	3.1	<0.50	<0.50	<0.50	29	12	<0.5	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	0.73	19	5.1	<0.5	<50	1.9
	09/05/00	<50	<0.50	<0.50	<0.50	<0.50	12	<5.0	<0.5		1.4
	10/27/00	<50	<0.50	<0.50	<0.50	<0.50	26	8.5	<0.5	<50	2.6
	01/23/01	100	0.63	<0.50	<0.50	<0.50	18	<5.0	<0.5	<50	2.0
	04/17/01	100	<0.50	<0.50	<0.50	<0.50	20	8.1	<0.5	<50	2.1
	08/16/01	81	<0.50	<0.50	<0.50	<0.50	15	6.0	<0.5	<50	2.1
	10/15/01	54	<0.50	<0.50	<0.50	<0.50	16	<5.0	<0.5	<50	1.6

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- • = External standardization was used due to matrix interference.
- •• = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[1]
MW-7	12/17/93	<50	<0.5	<0.5	<0.5	<0.5					
	03/14/94	<50	<0.5	<0.5	<0.5	<0.5					
	06/16/94	<50	<0.5	<0.5	<0.5	<0.5					
	08/30/94	<50	<0.5	<0.5	<0.5	<0.5					
	11/04/94	<50	<0.5	<0.5	<0.5	<0.5					
	01/20/95	<50	<0.5	<0.5	<0.5	<0.5					
	06/13/95	<50	<0.5	<0.5	<0.5	<0.5					
	09/28/95	<50	<0.50	<0.50	<0.50	<0.50					
	12/30/95	<50	<0.50	<0.50	<0.50	<0.50					
	03/26/96	<50	<0.50	<0.50	<0.50	<0.50					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/26/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/04/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/29/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/28/98	<50	<0.50	<0.50	0.71	2.8	<0.50				
	06/11/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	
	08/27/98	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	
	12/04/98	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	02/02/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	09/05/00[5]										
	10/27/00[5]										
	01/23/01[5]										
	04/17/01[5]										
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5	<50	<0.50

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- * = External standardization was used due to matrix interference.
- -- = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[3]
MW-8	12/17/93	150	<0.5	<0.5	<0.5	<0.5					
	03/14/94	<50	<0.5	<0.5	<0.5	<0.5					
	06/16/94	74	<0.5	<0.5	<0.5	<0.5					
	08/30/94	<50	<0.5	<0.5	<0.5	<0.5					
	11/04/94	<50	<0.5	<0.5	<0.5	<0.5					
	01/20/95	<50	<0.5	<0.5	<0.5	<0.5					
	06/13/95	<50	<0.5	<0.5	<0.5	<0.5					
	09/28/95	<50	<0.50	<0.50	<0.50	<0.50					
	12/30/95	<50	<0.50	<0.50	<0.50	<0.50					
	03/26/96	<50	<0.50	<0.50	<0.50	<0.50					
	05/18/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/26/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/06/96	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/26/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	06/30/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	09/04/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	12/29/97	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/28/98	<50	<0.50	<0.50	<0.50	<0.50	1.1				
	06/11/98	<50	<0.50	<0.50	<0.50	<0.50	1.6	<5.0	<0.5*	<50	
	08/27/98	<50	<0.50	<0.50	<0.50	<0.50	1.4	<5.0	<0.5*	<50	
	12/04/98	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	03/03/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	1.1	<5.0	<0.5*	<50	<0.50
	02/02/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.5*	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	0.73	<5.0	<0.5*	<50	<0.50
	09/05/00[2]										
	10/27/00[2]										
	01/23/01[2]										
	04/17/01[2]										
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	<0.50
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	<0.50
MW-9	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.5*	<50	
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	1.5	<5.0	<0.5*	<50	<0.50
	02/02/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	1.2	<5.0	<0.5*	<50	<0.50
	09/05/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.5*		<0.50
	10/27/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	110	<0.50
	01/23/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	<0.50
	04/17/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	<0.50
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	<0.50
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5*	<50	<0.50

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- * = External standardization was used due to matrix interference.
- -- = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #3685
9301 GREENBACK LANE, ORANGEVALE, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organic Compounds								
		Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE[1]	Tert-butanol	DIPE	Methanol	1,2-DCA[3]
MW-10	05/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.5•	<50	
	08/18/99	<50	<0.50	<0.50	<0.50	<0.50	<5.0				
	11/02/99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50
	02/02/00	51	<0.50	<0.50	<0.50	<0.50	<5.0				
	02/22/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	
	05/11/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50
	09/05/00	<50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.5•		<0.50
	10/27/00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50
	01/23/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50
	04/17/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50
	08/16/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50
	10/15/01	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.5•	<50	<0.50

NOTES:
- MTBE[1] = Methyl-tertiary-butyl-ether.
- DIPE[2] = Diisopropyl ether.
- 1,2-DCA[3] = 1,2-Dichloroethane.
- 11/02/99[4] = Duplicate Sample.
- < = Below indicated detection limit.
- — = Not analyzed.
- • = External standardization was used due to matrix interference.
- •• = Product was not typical gasoline.
- 08/24/00[5] = Well Not Sampled on This Date.

TABLE 2

GROUND WATER SAMPLE ANALYTICAL RESULTS

Beacon Station No .685
9301 Greenback Lane
Orangevale, California

Sample	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as gasoline (µg/L)	MTBE (µg/L)
HP-1	04/29/97	<0.5	1.9	1.8	10	100	<5.0
HP-2	04/30/97	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-1	09/04/97	<0.5	<0.5	<0.5	<0.5	<50	7.4
MW-2	09/04/97	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-3	09/04/97	0.57	<0.5	<0.5	<0.5	<50	<5.0
MW-4	09/04/97	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-5	09/04/97	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-6	09/04/97	400	300	320	1200	6,900	71
MW-7	09/04/97	<0.5	<0.5	<0.5	<0.5	<50	<5.0
MW-8	09/04/97	<0.5	<0.5	<0.5	<0.5	<50	<5.0

TPH = Total petroleum hydrocarbons.
MTBE = Methyl tertiary butyl ether.

BE081283

TABLE 3

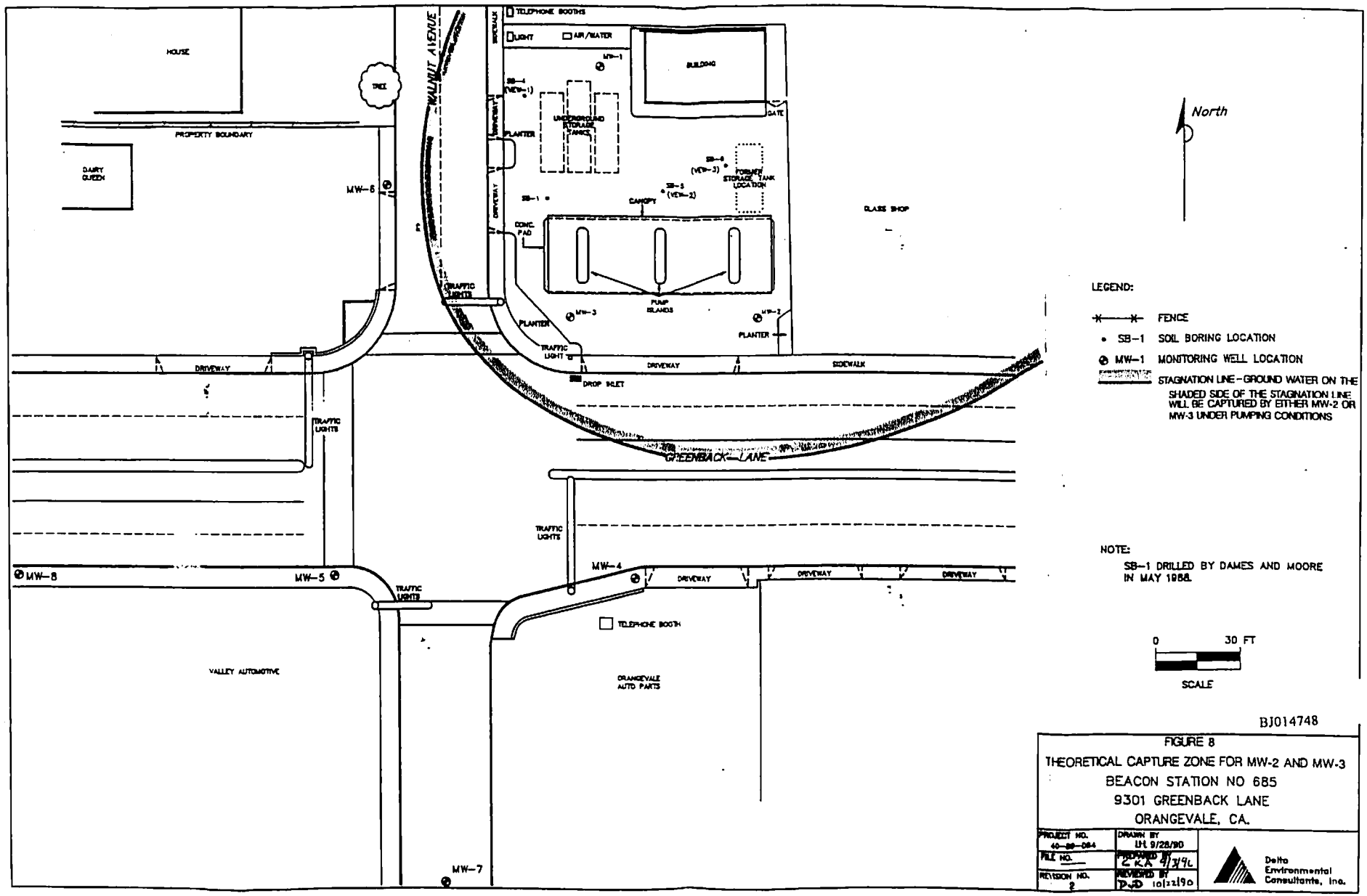
Ground Water Sample Analytical Results (ppm)

Sample	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	TPHa
MW-1	07/28/89	<0.02	<0.02	<0.02	<0.02	<5.0
	10/12/89	0.014	<0.0005	0.016	0.005	0.300
	02/23/90	0.010	<0.0005	0.0008	0.0014	0.340
	03/12/90	Not sampled.				
	04/30/90	<0.0005	<0.0005	0.0009	0.0019	0.540
MW-2	07/28/89	0.08	<0.02	<0.02	<0.02	<5.0
	10/12/89	0.180	<0.0005	<0.0005	<0.0005	0.430
	02/23/90	0.490	0.0023	0.0021	0.023	1.50
	03/12/90	Not sampled.				
	04/30/90	0.15	0.0084	0.0049	0.038	0.870
MW-3	07/28/89	1.03	0.23	0.06	0.22	8.03
	10/12/89	5.0	2.0	0.190	1.6	25.0
	02/23/90	4.8	1.3	0.190	0.670	15.0
	03/12/90	Not sampled.				
	04/30/90	3.3	3.3	0.22	1.8	25.0
MW-4	02/23/90	<0.0005	<0.0005	<0.0005	<0.0005	0.084
	03/12/90	0.0055	<0.0005	<0.0005	0.0006	<0.050
	04/30/90	0.036	<0.0005	<0.0005	0.009	0.220
MW-5	02/23/90	0.073	<0.0005	<0.0005	0.130	2.1
	03/12/90	0.044	<0.0005	<0.0005	0.0025	0.380
	04/30/90	0.080	<0.0005	<0.0005	0.0025	0.940
MW-6	02/23/90	0.110	0.0018	0.0008	0.260	1.6
	03/12/90	0.810	0.091	0.0056	0.400	5.400
	04/30/90	3.40	0.570	0.150	1.0	19.0
MW-7	05/22/90	<0.0005	<0.0005	<0.0005	<0.0005	<0.05
MW-8	05/22/90	0.0011	<0.0005	<0.0005	<0.0005	0.079

[a]Total petroleum hydrocarbons as gasoline.

APPENDIX G

REMEDIAL SYSTEM DIAGRAMS
(DELTA, 1995)



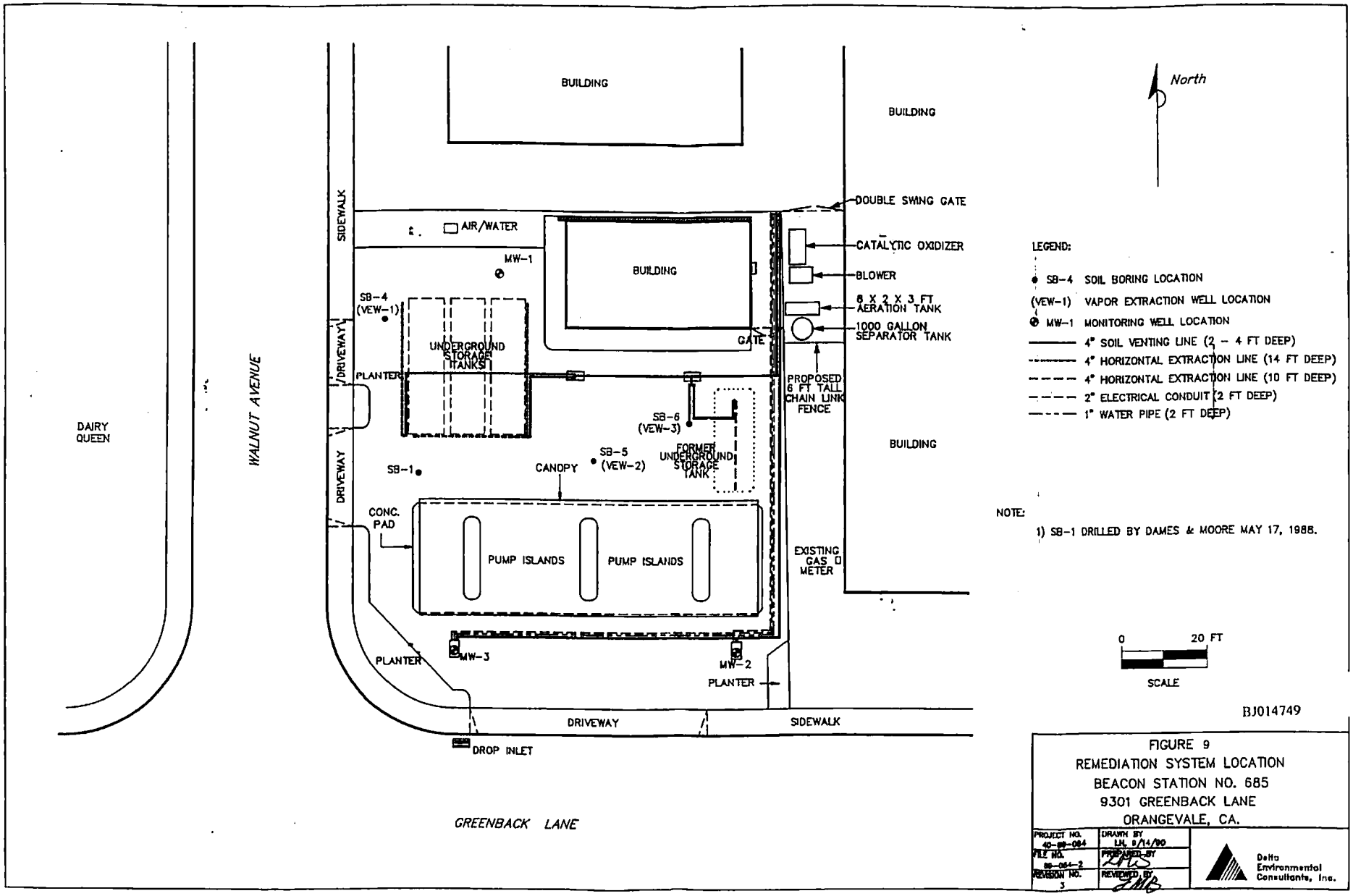
BJ014748

FIGURE 8

THEORETICAL CAPTURE ZONE FOR MW-2 AND MW-3
BEACON STATION NO 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 40-89-084	DRAWN BY LH 9/28/90
FILE NO. —	PREPARED BY CKA 4/3/91
REVISION NO. 2	REVIEWED BY PJD 10/22/90

Delta Environmental Consultants, Inc.

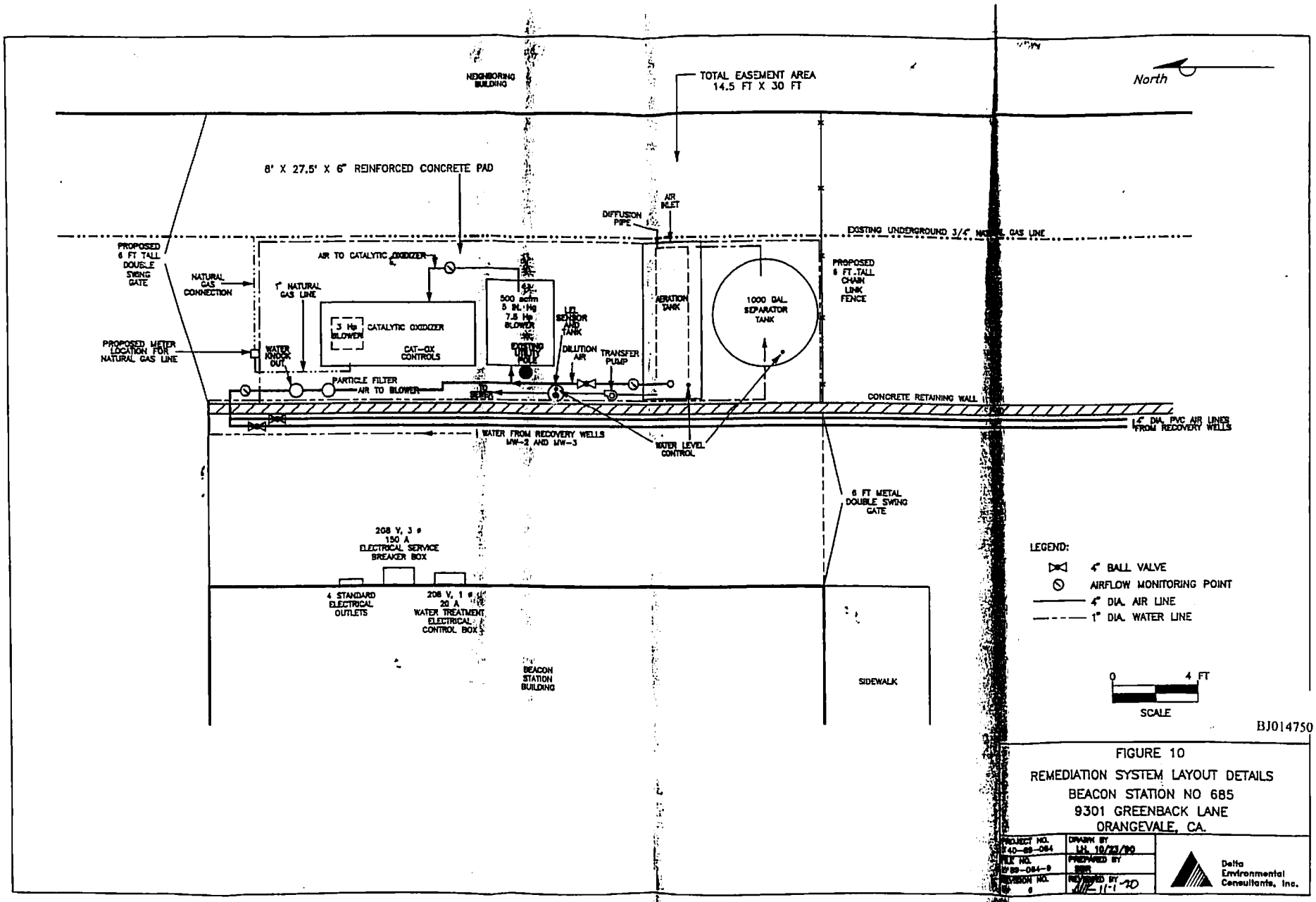


BJ014749

FIGURE 9
REMEDIATION SYSTEM LOCATION
BEACON STATION NO. 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO. 40-99-064	DRAWN BY LH, 9/14/99
FILE NO. 99-064-2	PREPARED BY
REVISION NO. 3	REVIEWED BY

Delta Environmental Consultants, Inc.



BJ014750

FIGURE 10
REMEDIATION SYSTEM LAYOUT DETAILS
BEACON STATION NO 685
9301 GREENBACK LANE
ORANGEVALE, CA.

PROJECT NO.	DRAWN BY
140-69-084	LH, 10/22/99
FILE NO.	PREPARED BY
69-084-9	BER
REVISION NO.	REVIEWED BY
0	11-1-99

Delta Environmental Consultants, Inc.